

=> fil reg

FILE 'REGISTRY' ENTERED AT 10:07:19 ON 28 APR 2009

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STRUCTURE FILE UPDATES: 26 APR 2009 HIGHEST RN 1139453-56-7

DICTIONARY FILE UPDATES: 26 APR 2009 HIGHEST RN 1139453-56-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

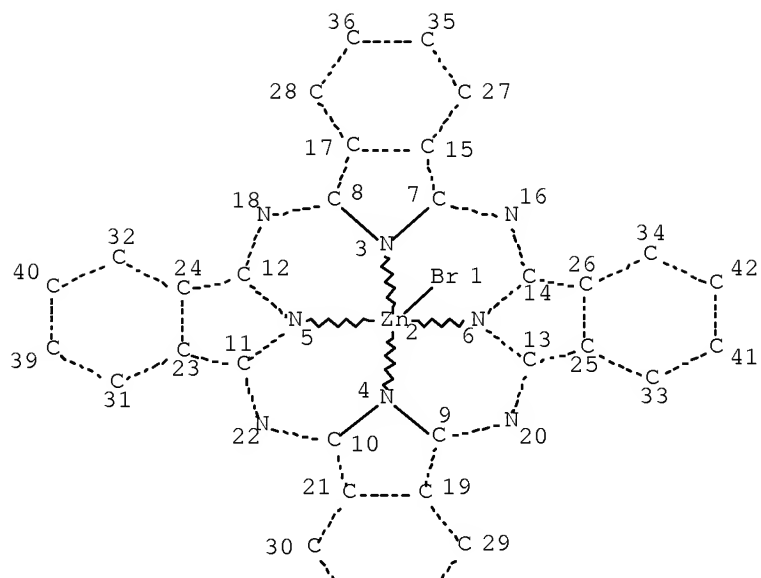
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

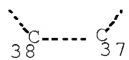
<http://www.cas.org/support/stngen/stdoc/properties.html>

=> d que 142

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L2	3	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	(14320-04-8/BI OR 7726-95-6/BI OR 97626-82-9/BI)
L3	28	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	14320-04-8/CRN
L4	1	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	97626-82-9/RN
L7	1	SEA FILE=REGISTRY	SPE=ON	ABB=ON	PLU=ON	L2 AND C32 H16 BR N8 ZN/MF
L8	2	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L7
L9	27	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L3
L10	2	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L4
L13	29	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	(L8 OR L9 OR L10)
L14	1	SEA FILE=HCAPLUS	SPE=ON	ABB=ON	PLU=ON	L13 AND L1
L20		STR				



Page 1-A



Page 2-A

NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

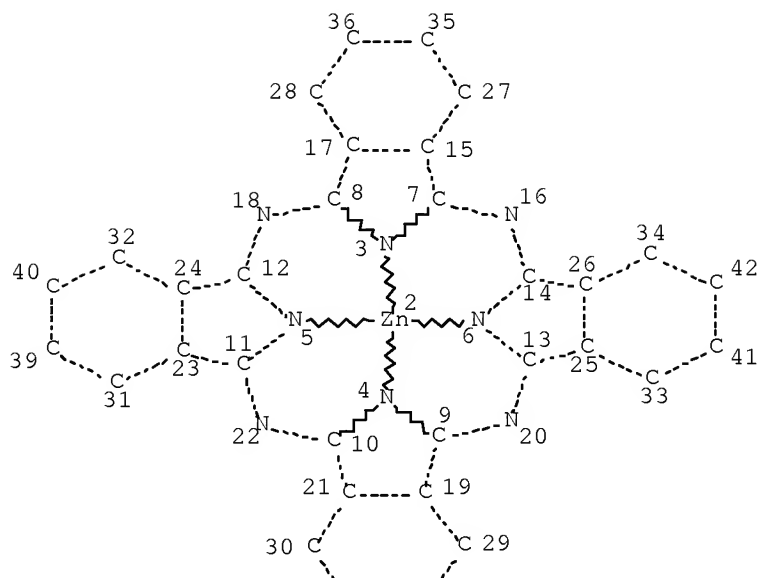
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NUMBER OF NODES IS 42

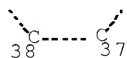
STEREO ATTRIBUTES: NONE

L25

STR



Page 1-A



Page 2-A

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 41

STEREO ATTRIBUTES: NONE

L27 3989 SEA FILE=REGISTRY SSS FUL L25

L31 6 SEA FILE=REGISTRY SUB=L27 SSS FUL L20

L32 3 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L31

L42 3 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L32 OR L10 OR L14

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 10:07:30 ON 28 APR 2009

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FILE COVERS 1907 - 28 Apr 2009 VOL 150 ISS 18  
FILE LAST UPDATED: 27 Apr 2009 (20090427/ED)

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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<http://www.cas.org/legal/infopolicy.html>

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 142 1-3 ibib ed abs hitstr hitind

L42 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2009:332310 HCAPLUS Full-text  
DOCUMENT NUMBER: 150:331535  
TITLE: Coloring materials containing phthalocyanine pigments having substituted central metals for green color filters  
INVENTOR(S): Takayama, Masakazu; Kimura, Shuichi; Suda, Yasumasa  
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 24pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2009057435	A	20090319	JP 2007-224952	20070831
PRIORITY APPLN. INFO.:			JP 2007-224952	20070831

ED Entered STN: 19 Mar 2009

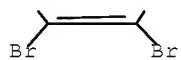
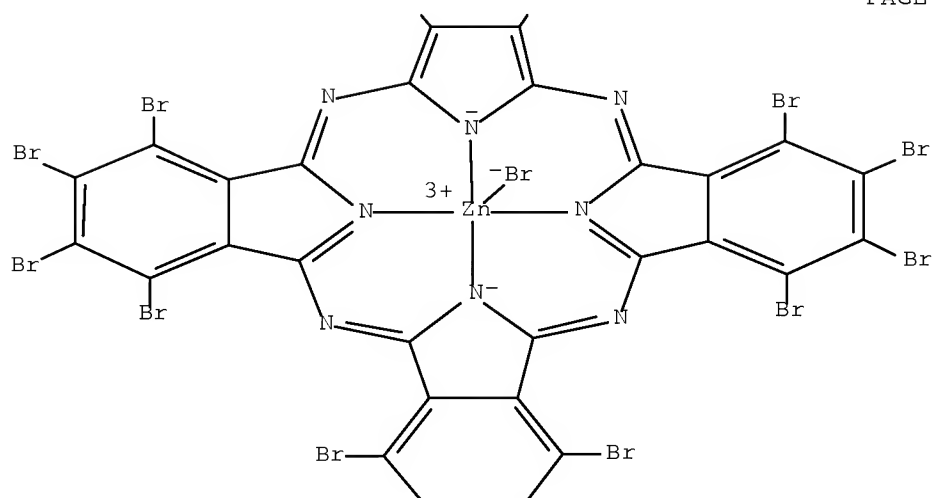
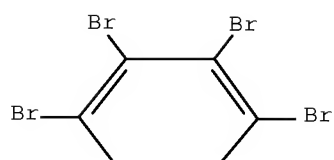
AB The pigments contain hexadecasubstituted phthalocyanine skeletons and substituted central metals, wherein the substituents of the phthalocyanine skeletons are Cl and/or Br, the central metals are Zn or Ni, and the substituents of the central metals are halo, CN, NO<sub>2</sub>, amino, heterocycle, R<sub>1</sub>OR<sub>2</sub>, R<sub>3</sub>COR<sub>4</sub>, and/or R<sub>5</sub>S(O)R<sub>6</sub> (R<sub>1</sub>, R<sub>2</sub> = H, alkyl, aryl; R<sub>3</sub>, R<sub>4</sub> = alkyl, aryl; R<sub>5</sub>, R<sub>6</sub> = alkyl). Thus, reacting tetrabromophthalic anhydride with formamide, reacting the resulting tetrabromophthalimide with PCl<sub>5</sub> and NH<sub>3</sub>, and reacting the resulting tetrabromodiiminoisindoline with ZnBr<sub>2</sub> gave hexadecabromophthalocyanine-ZnBr complex. The above complex was then mixed with Bu methacrylate-methacrylic acid-Me methacrylate-styrene copolymer and trimethylolpropane triacrylate (NK Ester ATMPT), applied on a glass plate, and cured to give a test piece showing high Y value (XYZ colorimetric system).

IT 1132674-44-2P 1132781-82-8P 1132781-84-0P  
1132781-86-2P 1132781-89-5P

(pigment; coloring materials containing phthalocyanine pigments having substituted central metals for green color filters)

RN 1132674-44-2 HCAPLUS

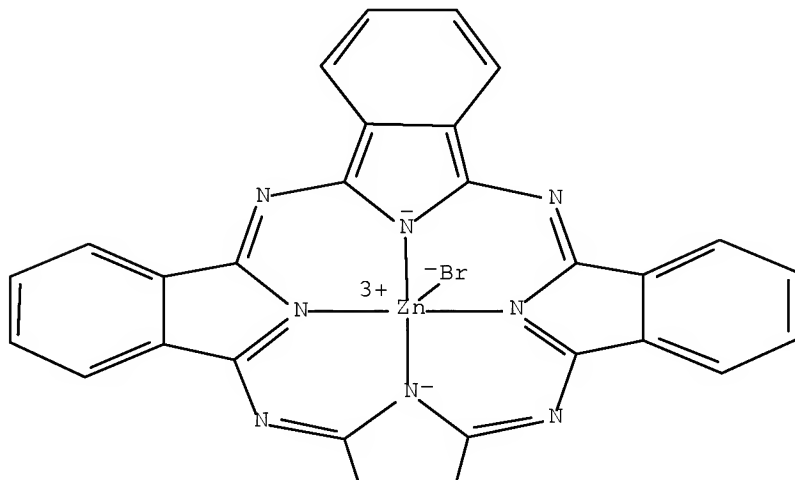
CN INDEX NAME NOT YET ASSIGNED



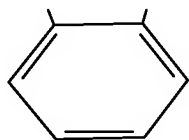
10/520,321

CN Zinc, bromo[C,C,C,C,C,C,C,C,C,C,C,C,C,C-pentadecabromo-C-chloro-  
29H,31H-phthalocyaninato(2-)-  
κN29,κN30,κN31,κN32]- (CA INDEX NAME)

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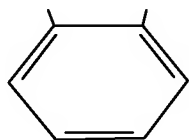
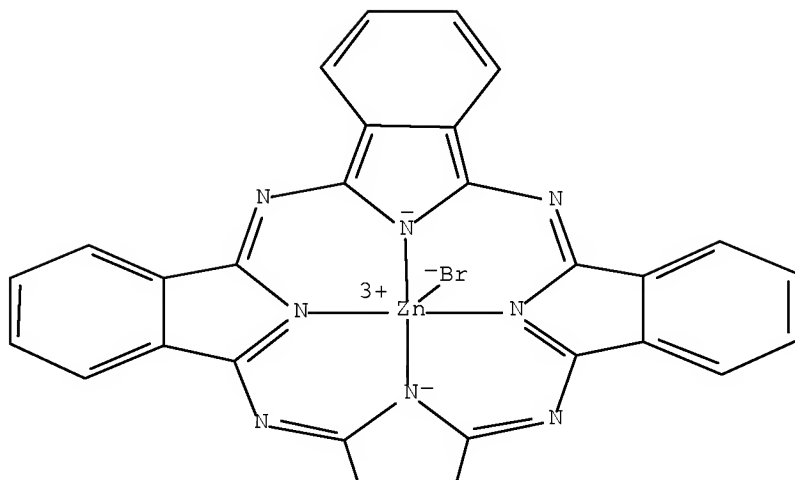
PAGE 2-A



15 ( D1—Br )

D1—Cl

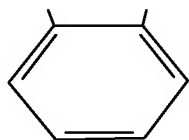
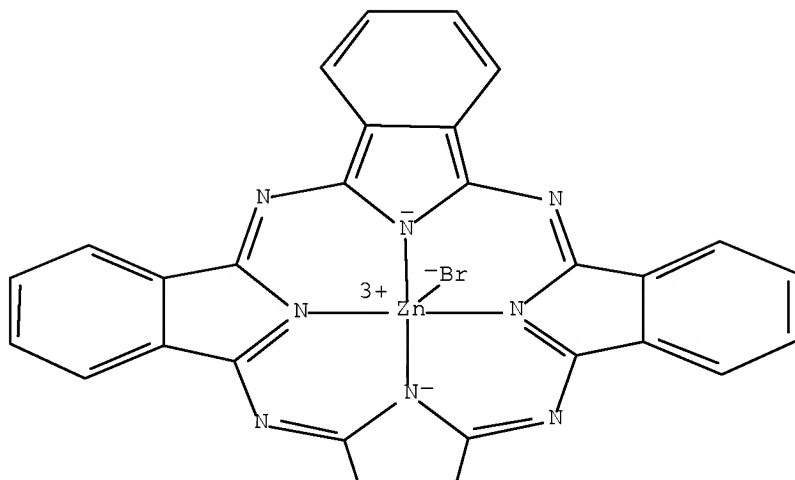
RN 1132781-84-0 HCAPLUS  
CN Zinc, bromo[C,C,C,C,C,C,C,C,C,C,C,C,C,C-dodecabromo-C,C,C,C-tetrachloro-  
29H,31H-phthalocyaninato(2-)-  
κN29,κN30,κN31,κN32]- (CA INDEX NAME)



12 ( D1—Br )

4 ( D1—Cl )

RN 1132781-86-2 HCAPLUS  
 CN Zinc, bromo[C,C,C,C,C,C,C,C,C,C-decabromo-C,C,C,C,C,C-hexachloro-  
 29H,31H-phthalocyaninato(2-)-  
 κN29,κN30,κN31,κN32]- (CA INDEX NAME)

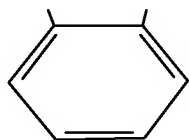
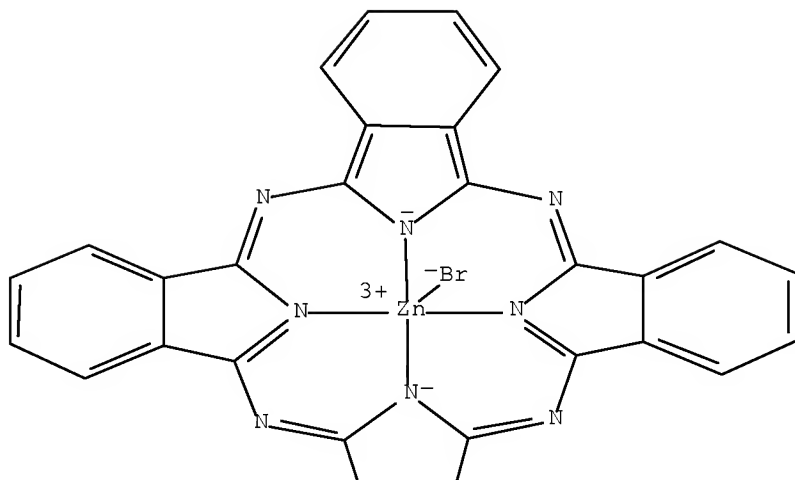


10 ( D1—Br )

6 ( D1—Cl )

RN 1132781-89-5 HCAPLUS  
 CN Zinc, bromo[C,C,C,C-tetrabromo-C,C,C,C,C,C,C,C,C,C,C,C-dodecachloro-  
 29H,31H-phthalocyaninato(2-)-  
 κN29,κN30,κN31,κN32]- (CA INDEX NAME)





4 ( D1— Br )

12 ( D1— Cl )

CC 41-7 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)

Section cross-reference(s): 74, 78

IT	1132674-44-2P	1132674-45-3P	1132674-46-4P	1132674-47-5P
	1132674-48-6P	1132674-49-7P	1132674-50-0P	1132674-51-1P
	1132674-52-2P	1132674-53-3P	1132674-54-4P	1132674-55-5P
	1132674-56-6P	1132674-57-7P	1132674-58-8P	1132674-59-9P
	1132674-60-2P	1132674-61-3P	1132674-62-4P	1132674-63-5P
	1132674-64-6P	1132674-65-7P	1132674-66-8P	1132674-67-9P
	1132674-68-0P	1132674-69-1P	1132674-70-4P	1132674-71-5P
	1132674-72-6P	1132674-73-7P	1132674-74-8P	1132674-75-9P
	1132674-76-0P	1132674-77-1P	1132674-78-2P	1132674-79-3P
	1132674-80-6P	1132674-81-7P	1132674-82-8P	1132674-83-9P
	1132781-82-8P	1132781-83-9P	1132781-84-0P	
	1132781-85-1P	1132781-86-2P	1132781-87-3P	
	1132781-89-5P	1132781-90-8P	1132781-91-9P	1132781-92-0P
	1132781-93-1P	1132781-94-2P	1132781-95-3P	1132781-96-4P
	1132781-97-5P	1132781-98-6P		

(pigment; coloring materials containing phthalocyanine pigments having substituted central metals for green color filters)

L42 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:80982 HCAPLUS Full-text

DOCUMENT NUMBER: 140:154571

TITLE: Green pigment for color filter, green pigment dispersion, photosensitive color composition, color filter, and liquid crystal panel

INVENTOR(S): Tatsuzawa, Masahiro; Sega, Shunsuke; Nishio, Akitaka; Kudou, Arata; Kiuchi, Eiichi; Katsube, Hiroshi

PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan; Dainippon Ink and Chemicals, Incorporated

SOURCE: PCT Int. Appl., 80 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2004010172	A1	20040129	WO 2003-JP9344	20030723
W: KR, US				
JP 2004070342	A	20040304	JP 2003-275219	20030716
JP 2004070343	A	20040304	JP 2003-275222	20030716
US 20060098316	A1	20060511	US 2005-520321	20051027
			<--	
PRIORITY APPLN. INFO.:			JP 2002-215169	A 20020724
			JP 2003-275219	A 20030716
			JP 2003-275222	A 20030716
			WO 2003-JP9344	W 20030723

ED Entered STN: 01 Feb 2004

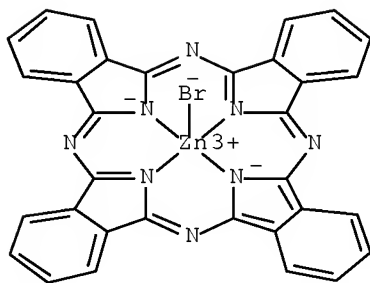
AB The invention relates to a green pigment for a color filter, which is capable of providing a color of color coordinates that cannot be provided by conventional green pigments, excellent in the coloring power of green, not so strong in the bluing effect, and has a high transmittance. By using such a green pigment, a photosensitive color composition for a color filter having a wide color reproduction range and a high transmittance, a pigment dispersion for a color filter, a color filter and a liquid crystal panel using such a color filter are also provided. The green pigment is a phthalocyanine green pigment, and can exhibits a color of a xy-coordinates region surrounded by certain equations 1, 2 and 3 on the XYZ chromaticity chart of CIE when measured alone using the F10 light source.

IT 97626-82-9

(green pigment for color filter, green pigment dispersion, photosensitive color composition, color filter, and liquid crystal panel)

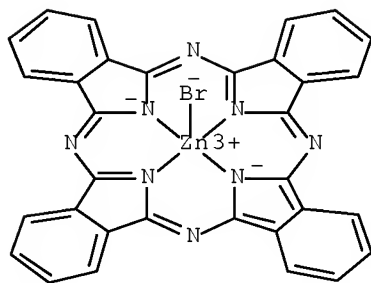
RN 97626-82-9 HCAPLUS

CN Zinc, bromo[29H,31H-phthalocyaninato(2-)-  
κN29,κN30,κN31,κN32]-, (SP-5-12)- (9CI) (CA  
INDEX NAME)



IC ICM G02B005-20  
ICS G02B005-22; G02F001-1335; C09B047-10; G03F007-004  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
IT 7726-95-6, Bromine, reactions 14320-04-8, Zinc phthalocyanine  
97626-82-9  
(green pigment for color filter, green pigment dispersion,  
photosensitive color composition, color filter, and liquid crystal panel)  
REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L42 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1985:478227 HCAPLUS Full-text  
DOCUMENT NUMBER: 103:78227  
ORIGINAL REFERENCE NO.: 103:12483a,12486a  
TITLE: Structure, spectra and conductivity of oxidized  
zinc phthalocyanine single crystals  
AUTHOR(S): Mossoyan-Deneux, M.; Benlian, D.; Ley, M.;  
Pierrot, M.; Sorbier, J. P.; Fournel, A.  
CORPORATE SOURCE: Lab. Chim. Coord., Marseille, 13397, Fr.  
SOURCE: Molecular Crystals and Liquid Crystals (1985),  
120(1-4), 437-40  
CODEN: MCLCA5; ISSN: 0026-8941  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
ED Entered STN: 07 Sep 1985  
AB Pt-anode-grown ZnPcCl and ZnPcCl<sub>x</sub>Br(1-x) (H<sub>2</sub>Pc = phthalocyanine) crystals were  
characterized by x-ray crystallog., IR absorption spectroscopy and elemental  
x-ray anal. Their semiconductive properties are discussed on the basis of the  
helical stack and intermol. overlaps between macrocyclic ligands.  
IT 97626-82-9DP, solid solns. with oxidized phthalocyanatozinc  
chloride  
(electrochem. preparation of, crystal structure and elec. conductivity and  
IR spectra in relation to)  
RN 97626-82-9 HCAPLUS  
CN Zinc, bromo[29H,31H-phthalocyaninato(2-)-  
κN29,κN30,κN31,κN32]-, (SP-5-12)- (9CI) (CA  
INDEX NAME)



CC 72-4 (Electrochemistry)

Section cross-reference(s): 73, 75, 76, 78

IT 53466-59-4DP, solid solns. with oxidized phthalocyanatozinc bromide

53466-59-4P 97626-82-9DP, solid solns. with oxidized

phthalocyanatozinc chloride

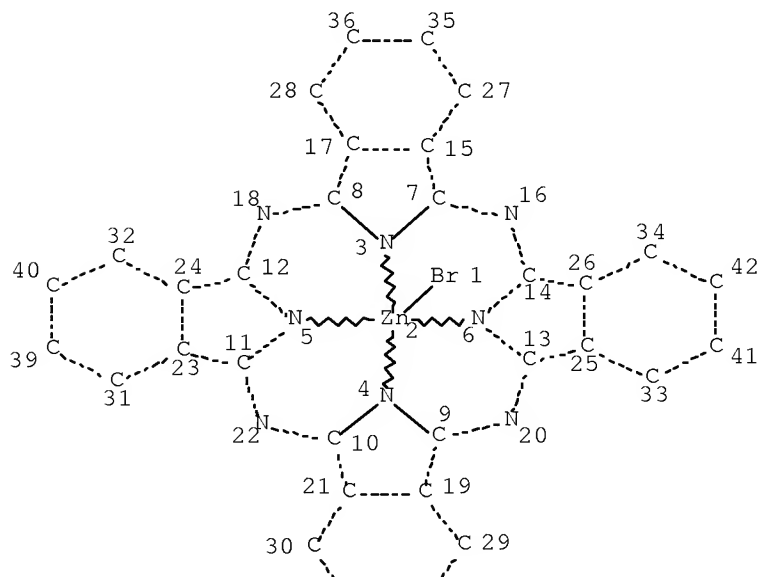
(electrochem. preparation of, crystal structure and elec. conductivity and

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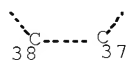
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 OR 7726-95-6/BI OR 97626-82-9/BI)  
 L3 28 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 14320-04-8/CRN  
 L4 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 97626-82-9/RN  
 L6 1002 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 7726-95-6/CRN  
 L7 1 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L2 AND C32 H16  
 BR N8 ZN/MF  
 L8 2 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L7  
 L9 27 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L3  
 L10 2 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L4  
 L11 1251 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L6  
 L13 29 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L8 OR L9 OR L10)  
 L14 1 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L13 AND L1  
 L20 STR



Page 1-A



Page 2-A

NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

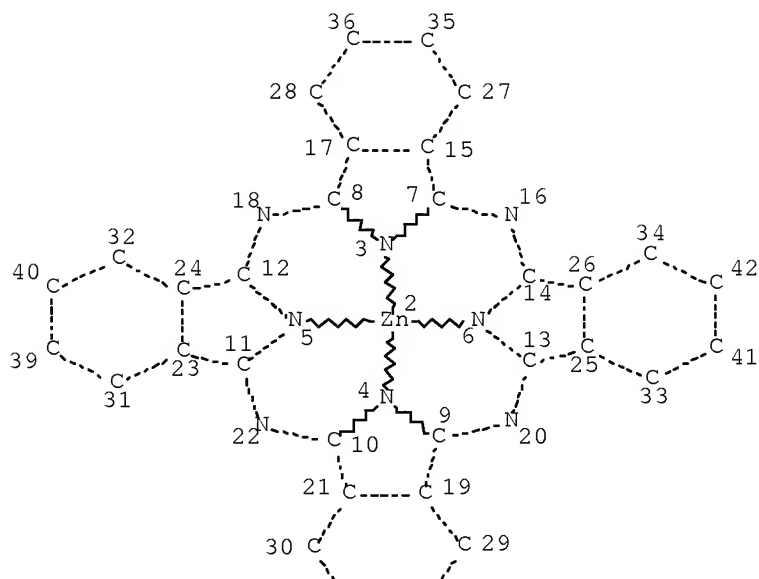
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NUMBER OF NODES IS 42

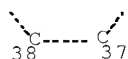
STEREO ATTRIBUTES: NONE

L25

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Page 1-A



Page 2-A

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 41

STEREO ATTRIBUTES: NONE

L27 3989 SEA FILE=REGISTRY SSS FUL L25  
 L29 71 SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L27 AND BR/ELS  
 L31 6 SEA FILE=REGISTRY SUB=L27 SSS FUL L20  
 L32 3 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L31  
 L33 46 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L29  
 L34 3553 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L27  
 L35 0 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L34 AND L11  
 L36 9 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L34(L) GREEN  
 PIGMENT?  
 L37 17 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L34 AND GREEN  
 PIGMENT?  
 L38 7 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L37 AND BROMIN?  
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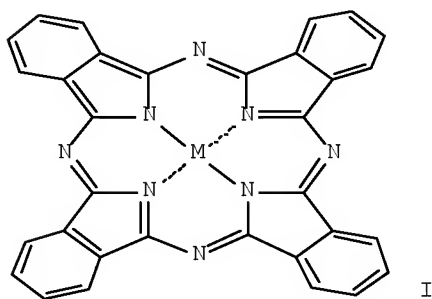
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(L38 OR L39 OR L40)  
L44 15 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L43 NOT L42  
L45 15 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L41 AND (CHLORIN?  
OR BROMIN? OR IOD? OR FLUOR?)  
L46 29 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L44 OR L45  
L47 19 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L46 AND (1840-2003  
) /PRY,AY,PY

=> d 147 1-19 ibib ed abs hitstr hitind

L47 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2005:609159 HCAPLUS Full-text  
DOCUMENT NUMBER: 143:123159  
TITLE: Environmentally friendly green color filter with  
good durability and coloring strength  
INVENTOR(S): Nagata, Yoshiaki; Takei, Toshio  
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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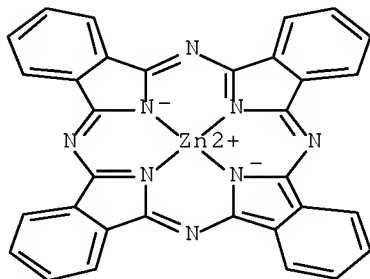
ED Entered STN: 14 Jul 2005  
GI



AB The invention relates to a color filter comprising red, green, and blue color filter elements formed on a transparent substrate; wherein the green color filter element comprises tetrabenzoporphyrin metal complex (I) (M = divalent, trivalent, or tetravalent metal or 2 of H) such as zinc phthalocyanine.

IT 14320-04-8P  
(green pigment; environmentally friendly green color filter with good durability and coloring strength)

RN 14320-04-8 HCAPLUS  
 CN Zinc, [29H,31H-phthalocyaninato(2-)-  
 κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX  
 NAME)



IC ICM G02B005-20  
 ICS C09B047-00  
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 41  
 IT 574-93-6P, Tetrabenzoporphyrine 3317-67-7P, Cobalt phthalocyanine  
 14055-02-8P, Nickel phthalocyanine 14320-04-8P  
 (green pigment; environmentally friendly green  
 color filter with good durability and coloring strength)

L47 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2004:80982 HCAPLUS [Full-text](#)

DOCUMENT NUMBER: 140:154571

TITLE: Green pigment for color filter, green pigment  
 dispersion, photosensitive color composition,  
 color filter, and liquid crystal panel

INVENTOR(S): Tatsuzawa, Masahiro; Sega, Shunsuke; Nishio,  
 Akitaka; Kudou, Arata; Kiuchi, Eiichi; Katsube,  
 Hiroshi

PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan; Dainippon  
 Ink and Chemicals, Incorporated

SOURCE: PCT Int. Appl., 80 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----
WO 2004010172	A1	20040129	WO 2003-JP9344	20030723
			<--	
W: KR, US				
JP 2004070342	A	20040304	JP 2003-275219	20030716
			<--	
JP 2004070343	A	20040304	JP 2003-275222	20030716
			<--	
US 20060098316	A1	20060511	US 2005-520321	20051027
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## PRIORITY APPLN. INFO.:

JP 2002-215169 A 20020724  
 <--  
 JP 2003-275219 A 20030716  
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 JP 2003-275222 A 20030716  
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 WO 2003-JP9344 W 20030723  
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ED Entered STN: 01 Feb 2004

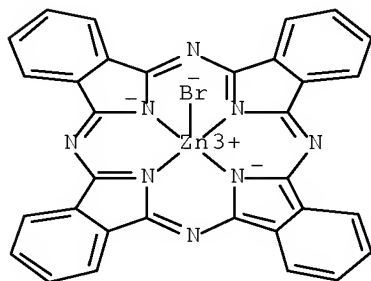
AB The invention relates to a green pigment for a color filter, which is capable of providing a color of color coordinates that cannot be provided by conventional green pigments, excellent in the coloring power of green, not so strong in the bluing effect, and has a high transmittance. By using such a green pigment, a photosensitive color composition for a color filter having a wide color reproduction range and a high transmittance, a pigment dispersion for a color filter, a color filter and a liquid crystal panel using such a color filter are also provided. The green pigment is a phthalocyanine green pigment, and can exhibits a color of a xy-coordinates region surrounded by certain equations 1, 2 and 3 on the XYZ chromaticity chart of CIE when measured alone using the F10 light source.

IT 97626-82-9

(green pigment for color filter, green pigment dispersion,  
 photosensitive color composition, color filter, and liquid crystal panel)

RN 97626-82-9 HCAPLUS

CN Zinc, bromo[29H,31H-phthalocyaninato(2-)-  
 $\kappa$ N29, $\kappa$ N30, $\kappa$ N31, $\kappa$ N32]-, (SP-5-12)- (9CI) (CA  
 INDEX NAME)



IC ICM G02B005-20

ICS G02B005-22; G02F001-1335; C09B047-10; G03F007-004

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)

IT 7726-95-6, Bromine, reactions 14320-04-8, Zinc  
 phthalocyanine 97626-82-9

(green pigment for color filter, green pigment dispersion,  
 photosensitive color composition, color filter, and liquid crystal panel)

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L47 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2003:738153 HCAPLUS Full-text

DOCUMENT NUMBER: 140:153579

TITLE: Study of some novel metal-chelated and

brominated phthalocyanine dyes in relation to their photo-physical properties

AUTHOR(S): Gan, Changsheng; Yan, Tiantang; Peng, Bixian

CORPORATE SOURCE: Sch. Chem. Mater. Sci., Univ. Sci. Technology of China, Hefei, 230026, Peop. Rep. China

SOURCE: Huaxue Wuli Xuebao (2003), 16(4), 293-298

CODEN: HWXUE4; ISSN: 1003-7713

PUBLISHER: Kexue Chubanshe

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

ED Entered STN: 22 Sep 2003

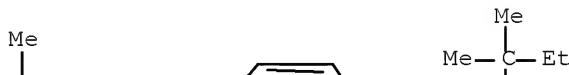
AB Several kinds of novel tetra-substituted metal phthalocyanines have been synthesized, based on the precursor of 3-(2,4-ditert-pentylphenoxy)phthalonitrile. The central metals include lead, zinc, copper, nickel, manganese, cobalt and magnesium. These compds. are characterized by elemental anal., UV-Vis, IR and 1H-NMR. Some of them are selected to be further subjected to bromination. Through expts., we draw the conclusion that metalation of these phthalocyanines can influence their absorption wavelengths greatly. Most of the metal phthalocyanines are blue-shifted compared to that of free phthalocyanine. The film photo-absorption behavior is also investigated by spin-coating with Bu ether and the results show that there is a slight increase of absorption wavelength and the broadening of absorption bands. Under proper conditions, reacting some of these dyes with bromine can produce to a certain extent, bathochromic effect. The absorption wavelength of some of the brominated compds. is very close to that of laser used in the information technol. An attempt is made to correlate the structures of the metal-centered and brominated at-(2,4-ditert-pentylphenoxy) phthalocyanines with their photo-phys. properties. The nature of the effects of the substitution, central metals and bromination on Q-band absorption of these dyes are presented and discussed.

IT 652155-15-2P  
(preparation and spectroscopic study of metal-chelated and brominated phthalocyanine dyes)

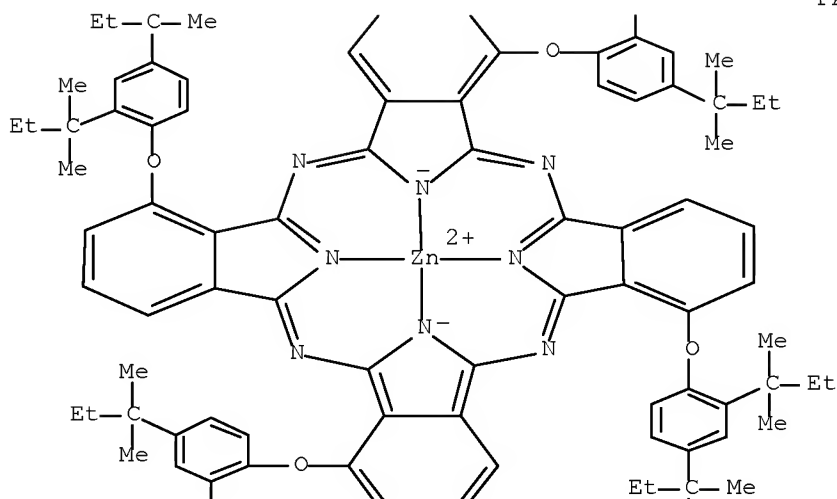
RN 652155-15-2 HCAPLUS

CN Zinc, [1,8,15,22-tetrakis[2,4-bis(1,1-dimethylpropyl)phenoxy]-C,C,C,C-tetrabromo-29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,κN32]- (9CI) (CA INDEX NAME)

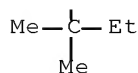
PAGE 1-A



PAGE 2-A



PAGE 3-A



4 ( D1—Br )

- CC 73-3 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)  
 Section cross-reference(s): 41, 78
- ST metal phthalocyanine dye prepn bromination UV IR proton NMR
- IT UV and visible spectra  
 (absorption, in CHCl<sub>3</sub> and films coated with Bu ether; of metal-chelated and brominated phthalocyanine dyes)
- IT IR spectra  
 (of metal-chelated and brominated phthalocyanine dyes)
- IT Bromination  
 Metalation  
 (preparation and spectroscopic study of metal-chelated and brominated phthalocyanine dyes)
- IT Metallophthalocyanines  
 (preparation and spectroscopic study of metal-chelated and brominated phthalocyanine dyes)
- IT 651739-94-5P  
 (preparation and spectroscopic study of metal-chelated and brominated phthalocyanine dyes)

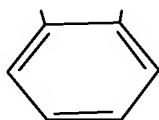
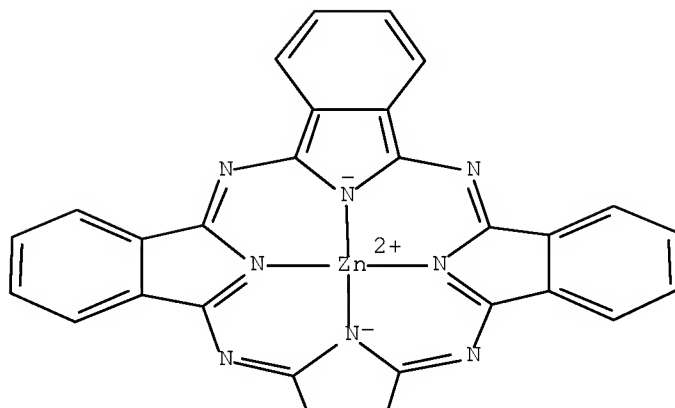
10/520,321

IT 186415-98-5P 651739-93-4P 652133-38-5P 652133-39-6P  
652133-40-9P 652133-41-0P 652133-42-1P 652133-43-2P  
652155-09-4P 652155-11-8P 652155-13-0P ~~652155-15-2P~~  
(preparation and spectroscopic study of metal-chelated and  
~~brominated~~ phthalocyanine dyes)  
IT 120-95-6, 2,4-Di-tert-pentylphenol 51762-67-5,  
1,2-Dicyano-3-nitrobenzene  
(preparation and spectroscopic study of metal-chelated and  
~~brominated~~ phthalocyanine dyes)

L47 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2003:525534 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:102531  
TITLE: Ink-jet ink composition and color filter thereof  
INVENTOR(S): Tokuda, Hiroyuki; Katsube, Hiroshi; Araki, Shingo;  
Kishimoto, Masaaki; Yamaguchi, Yoshio  
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003192947	A	20030709	JP 2001-393861	20011226
			<--	
PRIORITY APPLN. INFO.:			JP 2001-393861	20011226
			<--	

OTHER SOURCE(S): MARPAT 139:102531  
ED Entered STN: 10 Jul 2003  
AB Title inkjet ink composition comprises (A) a halogenated phthalocyanine  
pigment as an essential ingredient (e.g., zinc tridecabromodichloro  
phthalocyanine complex), (B) a polymer containing 2-oxo-1,3-dioxolane-4-yl  
groups and acidic groups (e.g., benzyl methacrylate-methacrylic acid-(2-oxo-  
1,3-dioxolan-4-yl)methyl methacrylate copolymer). The color filter comprises a  
substrate and a hardening coating film layer (obtained from the ink  
composition) coated on the substrate. The color filter exhibits high color  
purity, high color d., good transparency and heat resistance.  
IT ~~535965-46-9~~, Zinc tridecabromodichlorophthalocyanine complex  
(~~pigments~~; production of ink-jet ink composition for color  
filters)  
RN 535965-46-9 HCAPLUS  
CN Zinc, [C,C,C,C,C,C,C,C,C,1,2,3,4-tridecabromo-C,C-dichloro-29H,31H-  
phthalocyaninato(2-)-κN29,κN30,κN31,κN32]-  
(9CI) (CA INDEX NAME)



2 ( D1—C1 )

13 ( D1—Br )

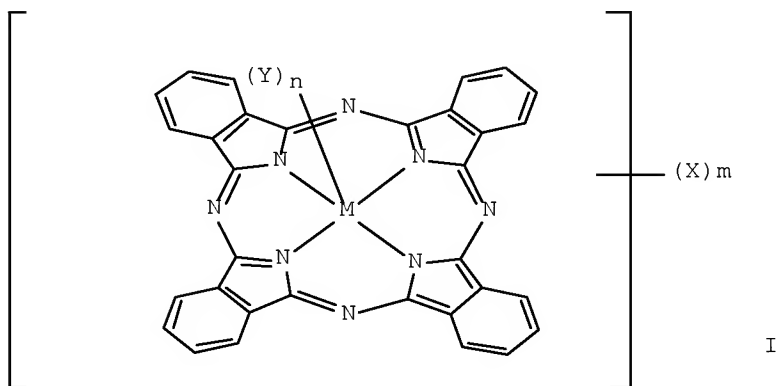
IC ICM C09D011-00  
 ICS B41M005-00; C09B047-10; G02B005-20  
 CC 42-12 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 74  
 IT 535965-46-9, Zinc tridecabromodichlorophthalocyanine complex  
 535965-47-0, Nickel tridecabromodichlorophthalocyanine complex  
 872613-79-1, C. I. Pigment Yellow 150  
 (pigments; production of ink-jet ink composition for color  
 filters)

L47 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2003:479041 HCAPLUS Full-text  
 DOCUMENT NUMBER: 139:60523  
 TITLE: Color filters and pigmented resists therefor  
 having high transparency and yellowish green color  
 INVENTOR(S): Katsube, Hiroshi; Funakura, Shoji; Kiuchi, Eiichi;  
 Kimura, Akira; Kudo, Arata; Kishimoto, Masaaki;  
 Yamaguchi, Yoshio  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003176423	A	20030624	JP 2001-378537	20011212
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PRIORITY APPLN. INFO.:			JP 2001-378537	20011212
			<--	

OTHER SOURCE(S): MARPAT 139:60523  
 ED Entered STN: 24 Jun 2003  
 GI

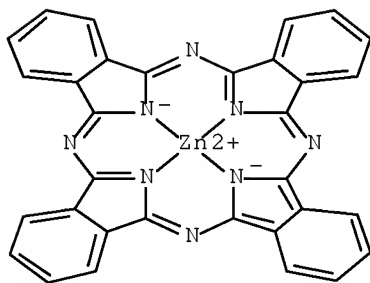


AB The resists contain organic green pigments comprising  
 halometallophthalocyanine I (M = Al, Si, Sc, Ti, V, Mg, Fe, Co, Ni, Zn, Ga,  
 Ge, Y, Zr, Nb, In, Sn, Pb; X = F, Cl, Br, I; m = 8-16 integer; Y = F, Cl, Br,  
 I, O, OH, SO<sub>4</sub>; n = 0-2 integer) and long-alk(en)yl monocarboxylates.

IT 14320-04-8DP, Zinc phthalocyanine, brominated,  
 chlorinated  
 (transparent yellowish green resists containing  
 heterometallophthalocyanine pigments for color filters)

RN 14320-04-8 HCAPLUS

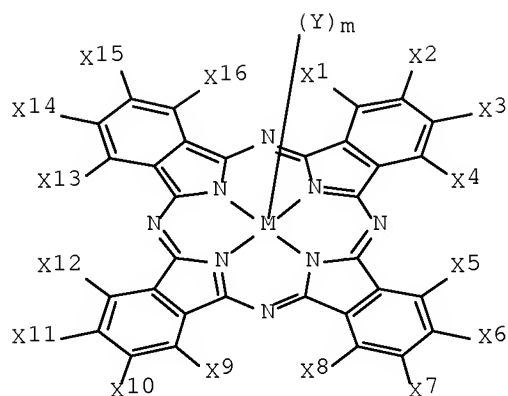
CN Zinc, [29H,31H-phthalocyaninato(2-)-  
 κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX  
 NAME)



IC ICM C09B067-20  
ICS G02B005-20  
CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 38, 41, 73  
ST color filter yellowish green heterometallophthalocyanine pigment;  
transparent bright green color filter phthalocyanine pigment;  
~~brominated~~ chloroaluminum phthalocyanine pigment yellowish  
green  
IT 14154-42-8DP, ~~brominated~~, chlorinated 14320-04-8DP  
, Zinc phthalocyanine, ~~brominated~~, chlorinated  
210117-83-2P, Aronix M 7100-Kayarad DPHA copolymer  
(transparent yellowish green resists containing  
heterometallophthalocyanine pigments for color filters)

L47 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2003:452087 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:28689  
TITLE: Color filters and their photopolymerizable resin  
compositions having high purity and density of  
color  
INVENTOR(S): Yonehara, Yoshitomo; Sato, Shigeo; Wakita,  
Masanori; Katsube, Hiroshi; Araki, Shingo;  
Kishimoto, Masaaki; Yamaguchi, Yoshio  
PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2003167113	A	20030613	JP 2001-366491	20011130
			<--	
PRIORITY APPLN. INFO.:			JP 2001-366491	20011130
			<--	
OTHER SOURCE(S):	MARPAT	139:28689		
ED Entered STN:	13 Jun 2003			
GI				



I

AB The compns. contain halogenated phthalocyanine I ( $M = \text{Al, Si, Sc, Ti, V, Fe, Co, Ni, Zn, Ga, Ge, Y, Zr, Nb, In, Sn, Pb, or two H; X1-X16} = \text{H, F, Al, Br, I,}$  satisfying total halo number of 8-16;  $Y = \text{F, Cl, Br, I, O, OH; } m = 0-2$ ), carboxyl- or phenolic OH-containing aminoplasts, and photopolymerizable monomers [e.g., (meth)acrylic derivs. or maleimide derivs.]. The aminoplasts may be (i) condensates of (4,6-diamino-1,3,5-triazin-2-yl)benzoic acid (I) and HCHO, glyoxylic acid (II), succinic semialdehyde (III), and/or hydroxybenzaldehyde (IV) or (ii) condensates of triazine derivs. (e.g., melamine, benzoguanamine, and/or I) and aldehydes (e.g., II, III, and/or IV). Color filters from the compns. exhibit excellent durability such as heat and chemical resistance.

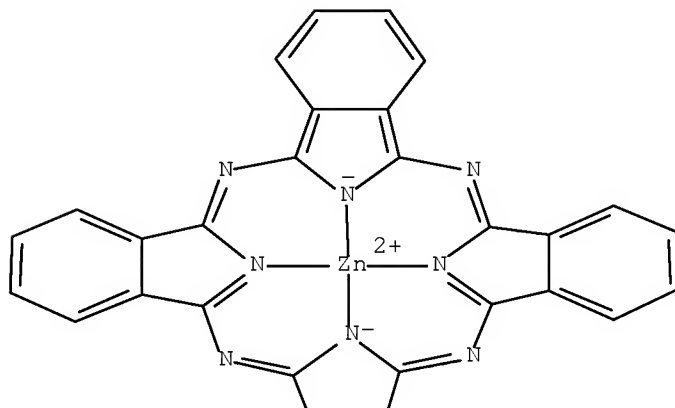
IT 535965-46-9

(pigments; pigmented photopolymerizable resin compns. having high purity and d. of color and color filters therefrom)

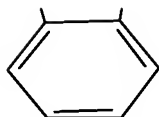
RN 535965-46-9 HCAPLUS

CN Zinc, [C,C,C,C,C,C,C,C,1,2,3,4-tridecabromo-C,C-dichloro-29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,κN32]-(9CI) (CA INDEX NAME)

PAGE 1-A







2 ( D1—C1 )

13 ( D1—Br )

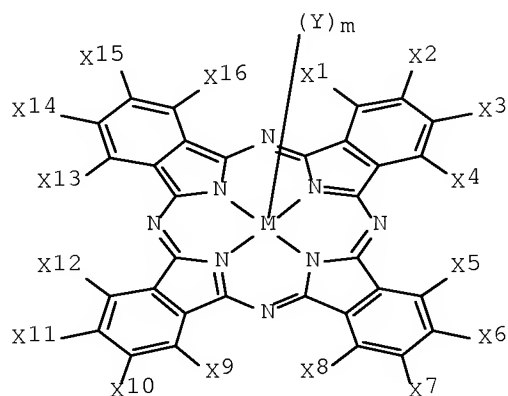
- IC ICM G02B005-20  
ICS C08G012-30; G03F007-004; G03F007-027; G03F007-032; G03F007-40
- CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38, 42, 73
- ST zinc halophthalocyanine pigmented color filter compn; nickel halophthalocyanine photopolymerizable color filter compn; benzoguanamine glyoxylic acid aminoplast color filter
- IT Aminoplasts  
(binders; pigmented photopolymerizable resin compns. having high purity and d. of color and color filters therefrom)
- IT Liquid crystal displays  
(for touch panels; pigmented photopolymerizable resin compns. having high purity and d. of color and color filters therefrom)
- IT Optical filters  
(pigmented photopolymerizable resin compns. having high purity and d. of color and color filters therefrom)
- IT 181779-99-7P, 2-(4,6-Diamino-1,3,5-triazin-2-yl)benzoic acid-formaldehyde copolymer 389092-23-3P, Benzoguanamine-glyoxylic acid copolymer 389092-24-4P, Benzoguanamine-p-hydroxybenzaldehyde copolymer  
(binders; pigmented photopolymerizable resin compns. having high purity and d. of color and color filters therefrom)
- IT 67653-78-5P, Dipentaerythritol hexaacrylate homopolymer  
(pigmented photopolymerizable resin compns. having high purity and d. of color and color filters therefrom)
- IT 535965-46-9 535965-47-0  
(pigments; pigmented photopolymerizable resin compns. having high purity and d. of color and color filters therefrom)

L47 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2003:432952 HCAPLUS Full-text  
DOCUMENT NUMBER: 139:15042  
TITLE: Green pigment dispersion  
compositions with high color purity and density,  
their photoimaging resists, and color filters

using them  
 INVENTOR(S): Yamaguchi, Yoshio; Araki, Shingo; Kishimoto, Masaaki; Katsube, Hiroshi  
 PATENT ASSIGNEE(S): Dainippon Ink and Chemicals, Inc., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003161828	A	20030606	JP 2002-80723	20020322
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PRIORITY APPLN. INFO.:			JP 2001-281041	A 20010917
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OTHER SOURCE(S): MARPAT 139:15042  
 ED Entered STN: 06 Jun 2003  
 GI



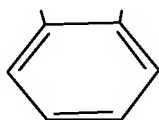
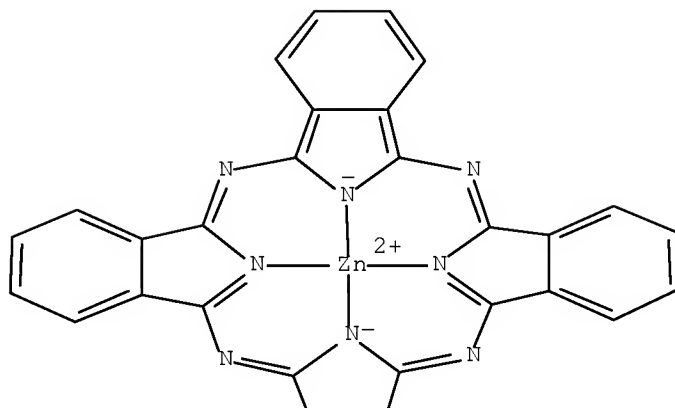
I

AB The compns. contain yellow pigments and halogenated metal phthalocyanines (I; M = Al, Si, Ti, V, Fe, Co, Ni, Zn, Ga, Ge, Y, Zr, Nb, In, Sn, Pb; X1-16 = H, F, Cl, Br, I; number of H for X = 0-8; Y = F, Cl, Br, I, O; m = 0-2).

IT ~~535965-46-9~~  
 (dispersions of green pigment halogenated metal phthalocyanines with high color purity and d. for photoimaging materials to manufacture color filters)

RN 535965-46-9 HCAPLUS

CN Zinc, [C,C,C,C,C,C,C,C,C,1,2,3,4-tridecabromo-C,C-dichloro-29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,κN32]-(9CI) (CA INDEX NAME)



2 ( D1—C1 )

13 ( D1—Br )

IC ICM G02B005-22  
ICS C09B067-46; C09D017-00; G02B005-20; G03F007-004

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
Section cross-reference(s): 41

ST green pigment phthalocyanine dispersion color  
filter; halogenated metal phthalocyanine green color filter display

IT Disperse systems  
Optical filters  
Photoimaging materials  
(dispersions of green pigment halogenated metal  
phthalocyanines with high color purity and d. for photoimaging  
materials to manufacture color filters)

IT Pigments, nonbiological  
(green; dispersions of green pigment  
halogenated metal phthalocyanines with high color purity and d. for  
photoimaging materials to manufacture color filters)

IT 535965-46-9 535965-47-0 872613-79-1, C.I. Pigment  
Yellow 150

(dispersions of ~~green pigment~~ halogenated metal  
phthalocyanines with high color purity and d. for photoimaging  
materials to manufacture color filters)

IT 29570-58-9, Dipentaerythritol hexaacrylate 500199-96-2, Excedic LC  
295

(photoimaging materials; dispersions of ~~green  
pigment~~ halogenated metal phthalocyanines with high color  
purity and d. for photoimaging materials to manufacture color filters)

L47 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2002:927435 HCAPLUS Full-text

DOCUMENT NUMBER: 138:10901

TITLE: Substituted di(hydroxy/alkoxy)silicon  
phthalocyanines and their uses

INVENTOR(S): Cook, Michael John; Fernandes, Isabelle

PATENT ASSIGNEE(S): Gentian AS, Norway

SOURCE: PCT Int. Appl., 122 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002096913	A1	20021205	WO 2002-GB2465	20020524

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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,  
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,  
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,  
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,  
NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ,  
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,  
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,  
SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,  
SN, TD, TG

AU 2002256821	A1	20021209	AU 2002-256821	20020524
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PRIORITY APPLN. INFO.:	GB 2001-12875	A	20010525
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GB 2001-14398	A	20010613
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WO 2002-GB2465	W	20020524
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OTHER SOURCE(S): MARPAT 138:10901

ED Entered STN: 06 Dec 2002

AB This invention relates to certain substituted di(hydroxy/alkoxy)silicon  
phthalocyanines and certain uses thereof, in particular their uses in  
photodynamic therapy and in photodiagnosics. For example, SiL(OH)<sub>2</sub> (H<sub>2</sub>L =  
1,4-dibutoxy-2,3-bis(m-methoxyphenyl)- 8,11,15,18,11,25-  
hexa(decyl)phthalocyanine) was prepared by the reaction of HSiCl<sub>3</sub> and H<sub>2</sub>L,  
prepared from  
3,6-dibutoxy-4,5-bis(m-methoxyphenyl)phthalonitrile and 3,6-  
dihexylphthalocyanine. The fluorescence quantum yields of the Si and Zn  
substituted phthalocyanine complexes were determined The use of these  
complexes was demonstrated for the photodiagnosics and photodynamic therapy  
of various diseases.

IT 344453-66-3P

(preparation and fluorescence quantum yield and use in

10/520,321

photodynamic therapy and photodiagnostics)

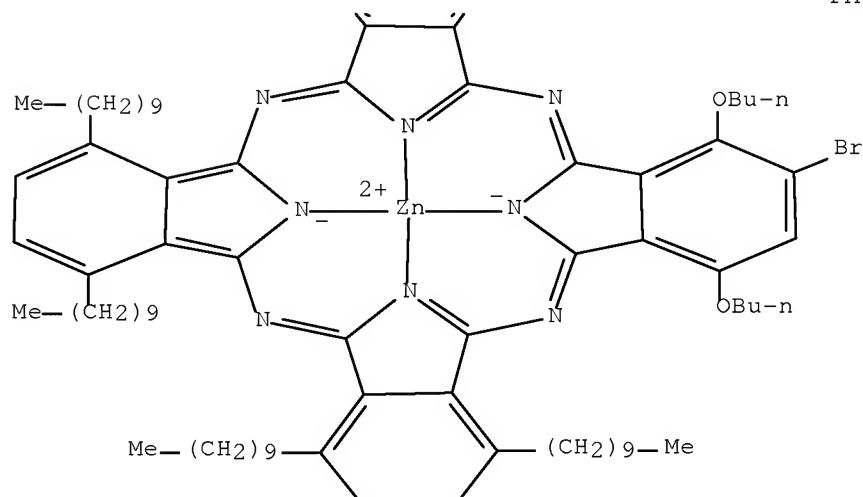
RN 344453-66-3 HCAPLUS

CN Zinc, [2-bromo-1,4-dibutoxy-8,11,15,18,22,25-hexakis(decyl)-29H,31H-phthalocyaninato(2-)- $\kappa$ N29, $\kappa$ N30, $\kappa$ N31, $\kappa$ N32]-, (SP-4-2)- (9CI) (CA INDEX NAME)

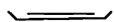
PAGE 1-A



PAGE 2-A



PAGE 3-A



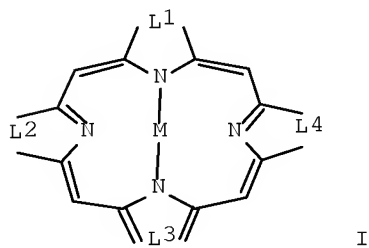
IC ICM C07F007-02  
 ICS A61K031-695; A61P029-02; A61P035-00; A61P043-00  
 CC 78-7 (Inorganic Chemicals and Reactions)  
 Section cross-reference(s): 1, 8, 28, 74  
 IT Metallophthalocyanines  
 (preparation and fluorescence quantum yield and use in  
 photodynamic therapy and photodiagnostics)  
 IT 138497-20-8P 138497-21-9P 138497-23-1P 138497-25-3P  
 (fluorescence quantum yield and use in photodynamic  
 therapy and photodiagnostics)  
 IT 476436-51-8P  
 (preparation and fluorescence quantum yield and use in  
 photodynamic therapy and photodiagnostics)  
 IT ~~344453-66-3P~~ 344453-93-6P 476436-05-2P 476436-06-3P  
 476436-07-4P 476436-08-5P 476436-09-6P 476436-10-9P  
 476436-11-0P 476436-12-1P 476436-13-2P 476436-14-3P  
 476436-17-6P 476436-20-1P 476436-21-2P 476436-22-3P  
 476436-23-4P 476436-24-5P 476436-25-6P 476436-27-8P  
 476436-29-0P 476436-30-3P 476436-32-5P 476436-33-6P  
 476436-34-7P  
 (preparation and fluorescence quantum yield and use in  
 photodynamic therapy and photodiagnostics)  
 IT 71-36-3, 1-Butanol, reactions 76-09-5, Pinacol 98-80-6,  
 Phenylboronic acid 110-89-4, Piperidine, reactions 124-63-0,  
 Methanesulfonyl chloride 143-10-2, Decanethiol 288-32-4,  
 Imidazole, reactions 358-23-6, Trifluoromethanesulfonic anhydride  
 375-72-4, Nonafluorobutanesulfonyl fluoride 542-69-8, 1-  
 Iodobutane 556-03-6, Tyrosine 557-34-6, Zinc acetate  
 629-05-0, 1-Octyne 688-74-4, Tributoxyboron 872-05-9, 1-Decene  
 1018-79-7, 2,3-Dicyano-1,4-dihydroxynaphthalene 1322-36-7,  
 Dodecanethiol 1692-15-5, 4-Pyridylboronic acid 2050-77-3, 1-  
 Iododecane 3282-30-2, Pivaloyl chloride 4733-50-0,  
 2,3-Dicyanohydroquinone 5720-07-0, 4-Methoxyphenylboronic acid  
 6165-68-0, 2-Thiopheneboronic acid 7440-66-6, Zinc, reactions  
 7786-30-3, Magnesium chloride, reactions 10025-78-2, Trichlorosilane  
 10365-98-7, 3-Methoxyphenylboronic acid 14047-29-1,  
 4-Carboxyphenylboronic acid 15854-87-2, 4-Iodopyridine  
 28611-39-4, (4-Dimethylaminophenyl)boronic acid 59016-93-2,  
 4-(Hydroxymethylphenyl)boronic acid 89343-06-6 89415-43-0,  
 4-Aminophenylboronic acid 92511-12-1 128912-47-0 135579-83-8,  
 6-Chlorohexylzinc bromide 152329-33-4 155589-48-3 189068-39-1  
 476436-41-6 476436-48-3 476436-53-0  
 (preparation of substituted phthalocyanines and their metal complexes)  
 REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L47 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN  
 ACCESSION NUMBER: 2002:503746 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:86005  
 TITLE: Phthalocyanines and their use in recording layers  
 of optical recording media  
 INVENTOR(S): Kiyono, Kazuhiro; Nakagawa, Shinichi; Misawa,  
 Tsutayoshi  
 PATENT ASSIGNEE(S): Mitsui Chemicals Inc., Japan; Yamamoto Chemicals  
 Inc.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002188018	A	20020705	JP 2000-386988	20001220
			<--	
PRIORITY APPLN. INFO.:			JP 2000-386988	20001220
			<--	

OTHER SOURCE(S): MARPAT 137:86005  
 ED Entered STN: 05 Jul 2002  
 GI

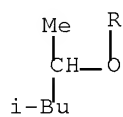
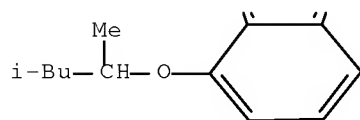
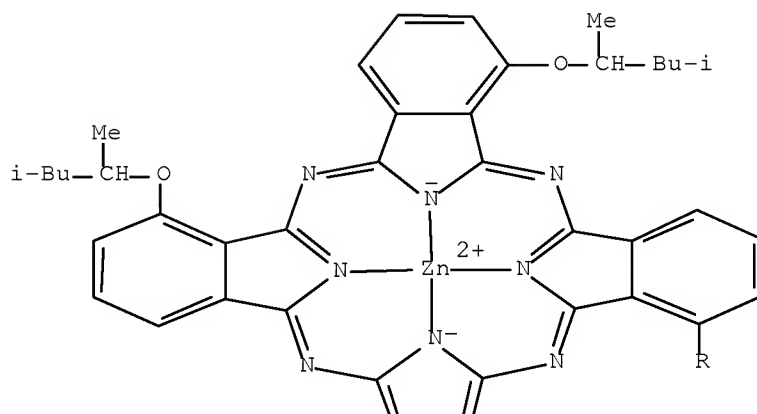


AB The phthalocyanines are shown as I [M = two H, divalent metal, tri- or tetravalent substituted metal, oxymetal; L1-L4 = II, III; at least one of L1-L4 = II; X = (un)substituted C1-10 linear or branched alkyl(thio), (un)substituted C1-15 linear or branched alkoxy; Y = H, NO<sub>2</sub>, halo; A = metal compound residue; B = group for linking phthalocyanines and A]. The media, e.g., write-once read-many disk of CD-R (CD-recordable), show high sensitivity in high-speed high-d. recording and improved jitter and deviation characteristics.

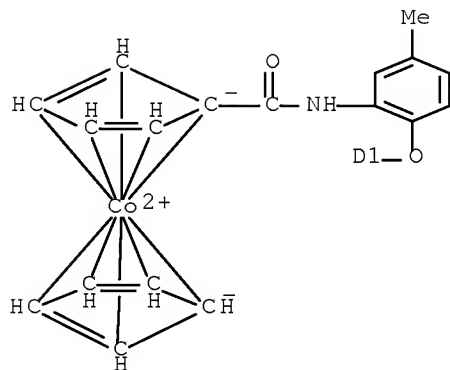
IT 440368-01-4 440368-02-5  
 (phthalocyanines and their use in recording layers of optical recording media)

RN 440368-01-4 HCAPLUS

CN Zinc, [[[[[5-methyl-2-[[C,C,C-tribromo-1,8,15,22-tetrakis(1,3-dimethylbutoxy)-29H,31H-phthalocyanin-C-yl-κN29,κN30,κN31,κN32]oxy]phenyl]amino]carbonyl]cobaltocenato(2-)]- (9CI) (CA INDEX NAME)

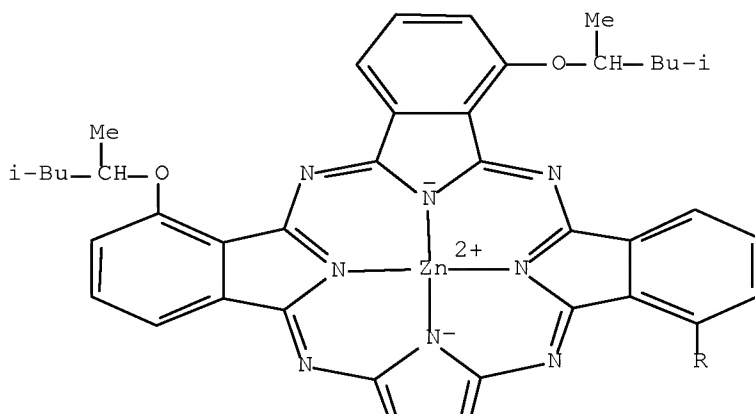


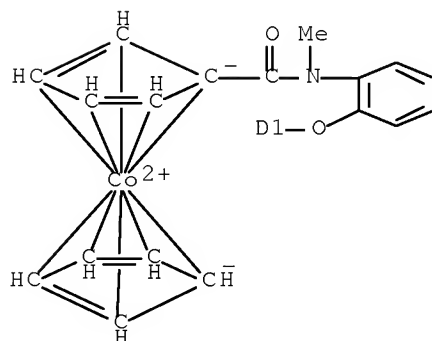
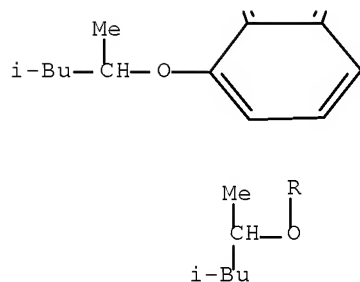




3 ( D1— Br )

RN 440368-02-5 HCAPLUS  
 CN Zinc, [[[methyl[2-[[[C,C,C-tribromo-1,8,15,22-tetrakis(1,3-dimethylbutoxy)-29H,31H-phthalocyanin-C-yl-  
 κN29,κN30,κN31,κN32]oxy]phenyl]amino]carbonyl]  
 cobaltocenato(2-)]- (9CI) (CA INDEX NAME)





3 ( D1— Br )

IC ICM C09B047-18  
ICS B41M005-26; C09B047-20; G11B007-24; C07F015-02; C07F015-04;  
C07F017-02

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)  
Section cross-reference(s): 28, 29, 41, 73

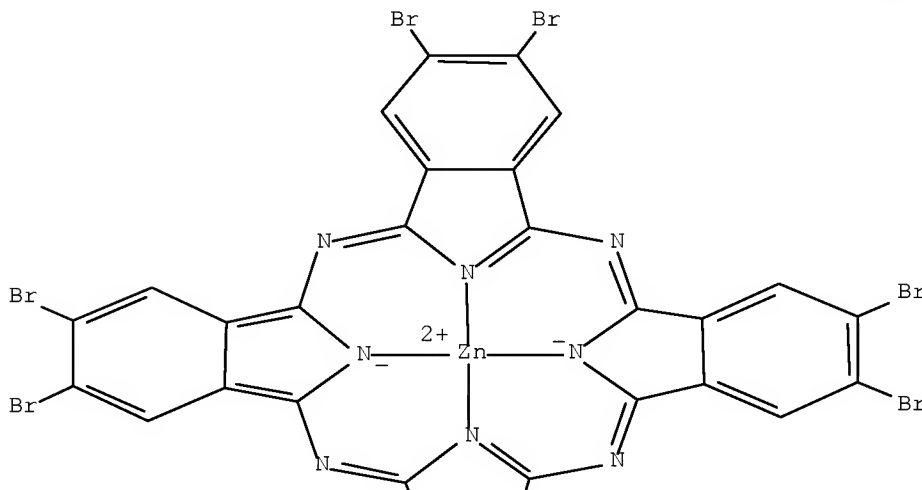
IT 112397-39-4P 415900-78-6P 440364-67-0P 440364-68-1P  
440368-16-1P 440368-17-2DP, brominated 440368-18-3DP,  
chlorinated 440368-18-3P 440368-19-4P 440368-20-7P  
(phthalocyanines and their use in recording layers of optical  
recording media)

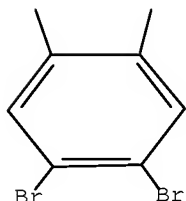
IT 440367-96-4 440367-99-7 440368-00-3 440368-01-4  
440368-02-5 440368-03-6 440368-06-9 440368-08-1  
440368-09-2 440368-11-6 440368-12-7 440368-14-9 440368-15-0  
(phthalocyanines and their use in recording layers of optical  
recording media)

L47 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 2002:379336 HCAPLUS Full-text  
DOCUMENT NUMBER: 137:225699  
TITLE: Synthesis of symmetrically substituted  
octabromophthalocyanine pigments and

their characterization  
 AUTHOR(S): Venugopala Reddy, K. R.; Keshavayya, J.  
 CORPORATE SOURCE: Department of Studies in Industrial Chemistry,  
 Kuvempu University, Karnataka, 577 451, India  
 SOURCE: Dyes and Pigments (2002), 53(3), 187-194  
 CODEN: DYPIDX; ISSN: 0143-7208  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 137:225699  
 ED Entered STN: 22 May 2002  
 AB A convenient and a simple route was suggested for the synthesis of sym.  
 substituted metal(II) 1,3,8,10,15,17,22,24- octabromophthalocyanine pigments  
 (MPOBr), of Co (CoPOBr), Ni (NiPOBr), Cu (CuPOBr) and Zn (ZnPOBr). MPOBr's  
 were synthesized from the corresponding octaaminosubstituted metal  
 phthalocyanines, MPOA's. Synthesized complexes were studied by elemental  
 anal., electronic spectra, IR spectra, magnetic susceptibility measurements,  
 powder XRD and thermogravimetric studies to evaluate the thermal stability,  
 crystallinity, structural integrity and purity of the complexes. The effects  
 of substituents on the electronic spectra and the orbital contribution to the  
 magnetic moments over a range of field strengths are discussed.  
 IT 455284-04-5P  
 (preparation, magnetic properties, thermal stability and XRD of)  
 RN 455284-04-5 HCAPLUS  
 CN Zinc, [2,3,9,10,16,17,23,24-octabromo-29H,31H-phthalocyaninato(2-)-  
 κN29,κN30,κN31,κN32]-, (SP-4-1)- (9CI) (CA  
 INDEX NAME)

PAGE 1-A





CC 78-7 (Inorganic Chemicals and Reactions)

Section cross-reference(s): 75, 77

IT 455283-98-4P 455284-00-1P 455284-02-3P 455284-04-5P

(preparation, magnetic properties, thermal stability and XRD of)

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
RE FORMAT

L47 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 2001:435186 HCAPLUS Full-text

DOCUMENT NUMBER: 135:55020

TITLE: Substituted phthalocyanines and their precursors

INVENTOR(S): Cook, Michael John; Heeney, Martin James

PATENT ASSIGNEE(S): Gentian AS, Norway

SOURCE: PCT Int. Appl., 146 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001042368	A1	20010614	WO 2000-GB4708	20001208
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W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2394891	A1	20010614	CA 2000-2394891	20001208
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EP 1238016	A1	20020911	EP 2000-985506	20001208
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R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2003516421	T	20030513	JP 2001-543656	20001208
<--				
EE 200200298	A	20030815	EE 2002-298	20001208
<--				
HU 2003001099	A2	20030828	HU 2003-1099	20001208
<--				
HU 2003001099	A3	20031128		

10/520,321

NO 2002002663	A	20020808	NO 2002-2663	20020605
			<--	
PRIORITY APPLN. INFO.:			GB 1999-29064	A 19991208
			<--	
			GB 2000-12348	A 20000522
			<--	
			GB 2000-25817	A 20001020
			<--	
			WO 2000-GB4708	W 20001208
			<--	

OTHER SOURCE(S): MARPAT 135:55020

ED Entered STN: 15 Jun 2001

AB Process is claimed for the preparation of metal phthalocyanines and their precursors including phthalonitrile sulfonate esters, substituted phthalonitriles and substituted phthalocyanines, phthalonitrile halides. For example 3,6-didecylphthalonitrile was prepared from 3,6-bis(trifluoromethanesulfonyloxy)phthalonitrile and decylzinc ~~iodide~~ and reacted with 4,5-dibromo-3,6-dibutoxyphthalonitrile, prepared from bromination of 2,3-dicyanohydroquinone, in presence of Ni(OAc)2.4H2O to give [1,4-dibutoxy-2,3-dibromo-8,11,15,18,22,25-hexadecylphthalocyaninato]nickel. The metal phthalocyanine derivs. have applications as photosensitizers for use in photodynamic therapy.

IT 344453-66-3P

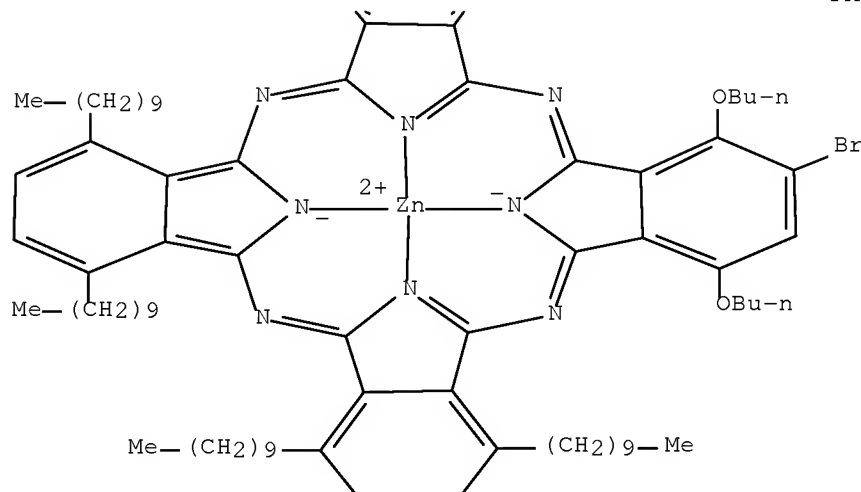
(preparation and photophysics and reaction with methylbutynol)

RN 344453-66-3 HCAPLUS

CN Zinc, [2-bromo-1,4-dibutoxy-8,11,15,18,22,25-hexakis(decyl)-29H,31H-phthalocyaninato(2-)-κN29,κN30,κN31,κN32]-, (SP-4-2)- (9CI) (CA INDEX NAME)

PAGE 1-A





- IC ICM C09B047-067  
ICS C09B047-04; C07D487-22; A61K041-00; C07D487-22; C07D259-00;  
C07D209-00; C07D209-00; C07D209-00; C07D209-00
- CC 78-7 (Inorganic Chemicals and Reactions)  
Section cross-reference(s): 8, 28, 63, 74
- IT 311-28-4, Tetrabutylammonium iodide 603-35-0,  
Triphenylphosphine, uses 7647-10-1, Palladium dichloride  
13965-03-2, Dichlorobis(triphenylphosphine)palladium 14221-01-3,  
Tetrakis(triphenylphosphine)palladium 14264-16-5,  
Dichlorobis(triphenylphosphine)nickel 51364-51-3, Pd2(dba)3  
(for preparation of metal phthalocyanine complexes for use in  
photodynamic therapy and as photosensitizers)
- IT 344453-66-3P  
(preparation and photophysics and reaction with methylbutynol)
- IT 288-32-4, Imidazole, reactions 358-23-6, Trifluoromethanesulfonic  
anhydride 375-72-4, Nonafluorobutanesulfonyl fluoride  
1018-79-7, 2,3-Dicyano-1,4-dihydroxynaphthalene 2050-77-3, 1-  
Iodododecane 4733-50-0, 2,3-Dicyanohydroquinone 131379-39-0  
135579-83-8 155589-48-3 344453-19-6  
(reactant for preparation of metal phthalocyanine complexes as  
photosensitizers and use in photodynamic therapy)
- IT 98-80-6, Phenylboronic acid 110-89-4, Piperidine, reactions  
112-55-0, 1-Dodecanethiol 115-19-5, 2-Methyl-3-butyn-2-ol  
124-63-0, Methanesulfonyl chloride 301-04-2, Lead diacetate  
629-05-0, 1-Octyne 688-74-4, Tributxyboron 872-05-9, 1-Decene  
994-89-8, Tributyl(ethynyl)tin 1066-54-2, Trimethylsilylacetylene  
3282-30-2, Pivaloyl chloride 5720-07-0, 4-Methoxyphenylboronic acid  
5970-45-6, Zinc acetate dihydrate 6018-89-9, Nickel diacetate  
tetrahydrate 6165-68-0, 2-Thiopheneboronic acid 7699-45-8, Zinc  
bromide 7786-30-3, Magnesium chloride, reactions 10025-82-8,  
Indium trichloride 10365-98-7, 3-Methoxyphenylboronic acid  
14047-29-1, p-Carboxyphenylboronic acid 15854-87-2, 4-

Iodopyridine 18869-47-1, DL-Tyrosine methyl ester  
 28611-39-4, 4-Dimethylaminophenylboronic acid 59016-93-2,  
 4-(Hydroxymethyl)phenylboronic acid 89343-06-6,  
 Triisopropylsilylacetylene 89415-43-0, p-Aminophenylboronic acid  
 92511-12-1 189068-39-1

(reactant for preparation of metal phthalocyanine complexes for use in  
 photodynamic therapy and as photosensitizers)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR  
 THIS RECORD. ALL CITATIONS AVAILABLE IN THE  
 RE FORMAT

L47 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:720831 HCAPLUS Full-text

DOCUMENT NUMBER: 126:82058

ORIGINAL REFERENCE NO.: 126:15719a,15722a

TITLE: Photoinduced intramolecular electron transfer in  
 an oblique zinc phthalocyanine - viologen linked  
 system

AUTHOR(S): Tian, Hong Jian; Zhou, Qing Fu; Xu, Hui Jun

CORPORATE SOURCE: Institute Photographic Chemistry, Academia Sinica,  
 Beijing, 100101, Peop. Rep. China

SOURCE: Chinese Chemical Letters (1996), 7(10),  
 931-934

CODEN: CCLEE7

PUBLISHER: Chinese Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 07 Dec 1996

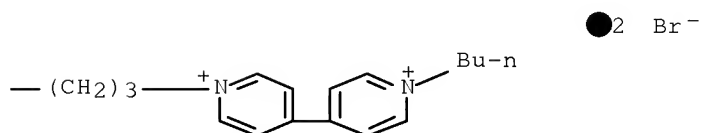
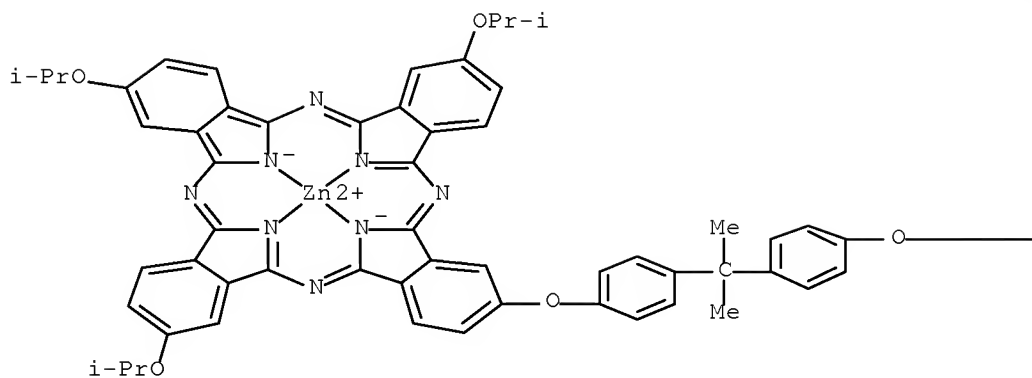
AB The spectroscopic properties and photoinduced electron transfer process have  
 been studied in zinc phthalocyanine - viologen system with bisphenol A  
 (ZnPcAV2+). It was found that the excited singlet state of zinc  
 phthalocyanine moiety is quenched and the fluorescence lifetime is reduced by  
 the linked viologen. Nanosecond laser photolysis studies showed that intramol.  
 quenching of the excited triplet state of zinc phthalocyanine moiety by the  
 attached viologen occurred giving reduced viologen radical ion (V+) that  
 survived over 50  $\mu$ s.

IT 185381-75-3

(photoinduced intramol. electron transfer in zinc  
 phthalocyanine-viologen system)

RN 185381-75-3 HCAPLUS

CN Zinc(2+), [1-butyl-1'-[3-[4-[1-methyl-1-[4-[[9,16,23-tris(1-  
 methylethoxy)-29H,31H-phthalocyanin-2-yl-  
 kN29,kN30,kN31,kN32]oxy]phenyl]ethyl]phenoxy]p  
 ropyl]-4,4'-bipyridiniumato(2-)]-, dibromide, (SP-4-2)- (9CI) (CA  
 INDEX NAME)



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Flash photolysis

Fluorescence quenching

Photoinduced electron transfer

(photoinduced intramol. electron transfer in zinc phthalocyanine-viologen system)

IT 185381-75-3 185381-79-7

(photoinduced intramol. electron transfer in zinc phthalocyanine-viologen system)

L47 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1996:643723 HCAPLUS Full-text

DOCUMENT NUMBER: 125:288889

ORIGINAL REFERENCE NO.: 125:53791a, 53794a

TITLE: Phthalocyanine compound and optical recording medium using same

INVENTOR(S): Nishimoto, Taizo; Misawa, Tsutayoshi; Sugimoto, Kenichi; Tsuda, Takeshi; Takuma, Hirosuke

PATENT ASSIGNEE(S): Mitsui Toatsu Chemicals, Japan; Yamamoto Chemicals Inc.; Mitsui Chemicals Inc.

SOURCE: Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

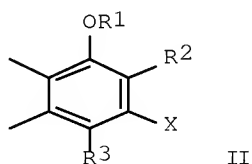
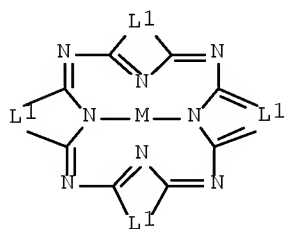
DOCUMENT TYPE: Patent



LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08193170	A	19960730	JP 1995-5639	19950118
			<--	
JP 3604439	B2	20041222		
PRIORITY APPLN. INFO.:			JP 1995-5639	19950118
			<--	

OTHER SOURCE(S): MARPAT 125:288889  
 ED Entered STN: 01 Nov 1996  
 GI



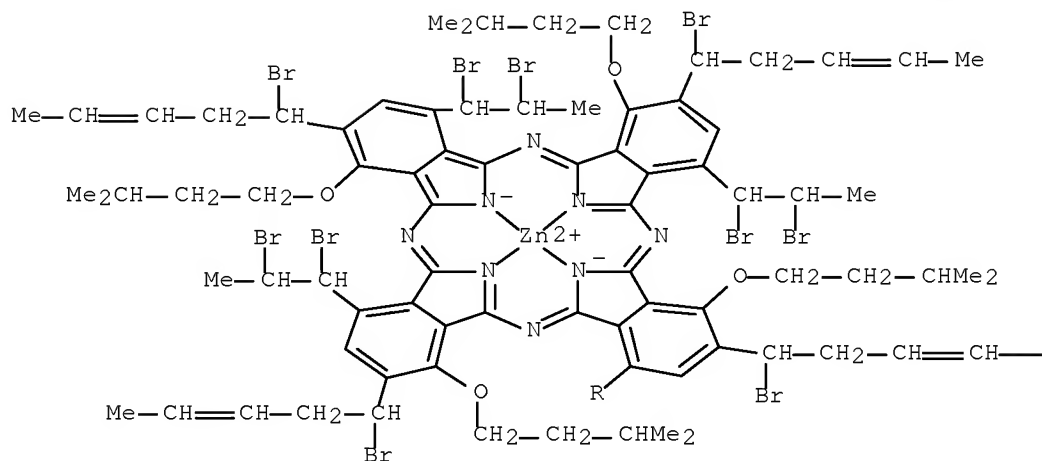
AB The title compound has a formula I (M = 2 H, divalent metal, trivalent 1-substituted metal, tetravalent 2-substituted metal, oxy metal; L1 = Q; OR1 C1-20 alkoxy; R2 = C3-20 alkyl or alkenyl substituted with 1-4 halo; X = halo). The recording medium using the above phthalocyanine compound is also claimed. The recording medium comprises a phthalocyanine compound-containing recording layer, a Au or Al-based reflection layer and a protection layer. The recording medium can be used for high speed and high-d. recording with superior sensitivity, recording characteristics, and storage stability.

IT 182495-09-6

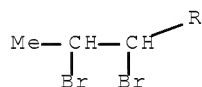
(for optical recording material)

RN 182495-09-6 HCAPLUS

CN Zinc, [2,9,16,23-tetrakis(1-bromo-3-pentenyl)-4,11,18,25-tetrakis(1,2-dibromopropyl)-1,8,15,22-tetrakis(3-methylbutoxy)-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]-, (SP-4-1)- (9CI) (CA INDEX NAME)



—Me



- IC ICM C09B047-18  
 ICS B41M005-26; C07D487-22; G11B007-24  
 CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic  
 and Other Reprographic Processes)  
 IT 182495-04-1D, brominated derivs. 182495-05-2D,  
 brominated derivs. 182495-06-3D, chlorinated  
 derivs. 182495-07-4D, brominated derivs. 182495-08-5D,  
 brominated derivs. 182495-09-6 182495-10-9D,  
 brominated derivs. 182495-11-0D, chlorinated

10/520,321

derivs. 182495-12-1D, chlorinated derivs. 182495-13-2D,  
brominated derivs. 182495-14-3D, brominated  
derivs.

(for optical recording material)

IT 182494-98-0DP, brominated derivs. 182494-99-1DP,  
brominated derivs. 182495-00-7DP, brominated  
derivs. 182495-01-8DP, brominated derivs. 182495-03-0DP,  
brominated and chlorinated derivs.  
(prepared for optical recording material)

L47 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1995:362934 HCAPLUS Full-text

DOCUMENT NUMBER: 123:212821

ORIGINAL REFERENCE NO.: 123:37649a,37652a

TITLE: Photoinduced intramolecular electron transfer and  
charge separation in zinc phthalocyanine-viologen  
linked system

AUTHOR(S): Shen, Shu-Yin; Liu, Ji-Xiang; Zhou, Qing-Fu; Xu,  
Hui-Jun; Takanae, N.; Kuriyama, Y.; Sakurai, H.;  
Tokumaru, Y.

CORPORATE SOURCE: Institute Photographic Chemistry, Chinese Academy  
Sciences, Beijing, 100101, Peop. Rep. China

SOURCE: Chinese Journal of Chemistry (1995),  
13(1), 33-9  
CODEN: CJOCEV; ISSN: 1001-604X

PUBLISHER: Science Press

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 21 Feb 1995

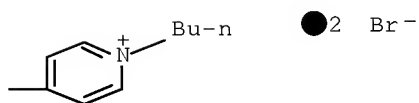
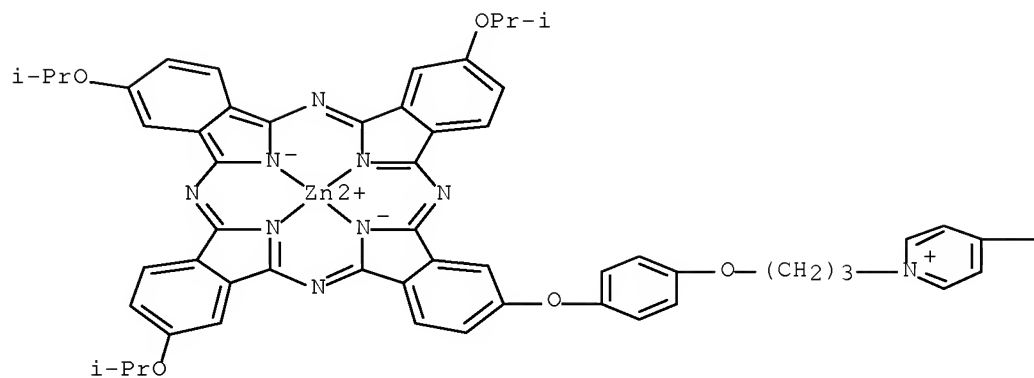
AB Photoinduced electron transfer and charge separation processes in zinc  
phthalocyanine-viologen linked system have been studied and the distance  
effect of donor/acceptor on electron transfer reaction is discussed. It is  
indicated that the fluorescence from the zinc phthalocyanine moiety is  
appreciably quenched and the life-time of singlet excited state is reduced by  
the pendant viologen. Time-resolved transient absorption spectra measurements  
show that intramol. quenching of the triplet state of zinc phthalocyanine by  
the attached viologen results in charge separation giving reduced viologen  
radical alive for a rather long period with hundred microsecond duration. The  
effect of the carbon chain length on the electron transfer rate constant and  
charge separation efficiency suggests that upon excitation, the zinc  
phthalocyanine and viologen groups tend to take closer conformation with the  
increase of the carbon chain examined. The rate constant for the intramol.  
electron transfer ket with n = 3 to 10 is in the order of 10<sup>4</sup> s<sup>-1</sup> and  
increases.

IT 168103-11-5 168103-12-6 168103-13-7

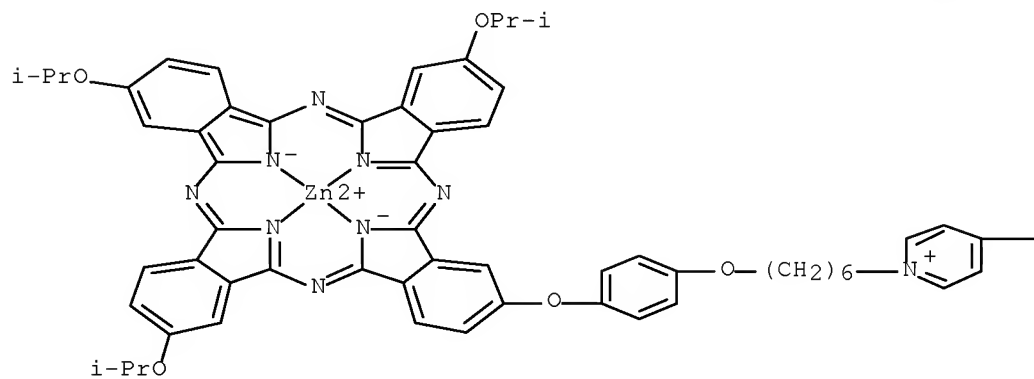
(photoinduced intramol. electron transfer and charge separation in zinc  
phthalocyanine-viologen linked system)

RN 168103-11-5 HCAPLUS

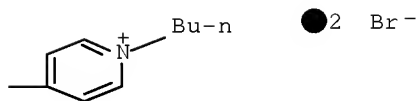
CN Zinc(2+), [1-butyl-1'-[3-[4-[9,16,23-tris(1-methylethoxy)-29H,31H-  
phthalocyanin-2-yl-κN29,κN30,κN31,κN32]oxy]phe  
noxy]propyl]-4,4'-bipyridiniumato(2-)]-, dibromide, (SP-4-2)- (9CI)  
(CA INDEX NAME)



RN 168103-12-6 HCAPLUS  
 CN Zinc(2+), [1-butyl-1'-[6-[4-[ [9,16,23-tris(1-methylethoxy)-29H,31H-phthalocyanin-2-yl-κN29,κN30,κN31,κN32]oxy]phenoxy]hexyl]-4,4'-bipyridiniumato(2-)]-, dibromide, (SP-4-2)- (9CI)  
 (CA INDEX NAME)

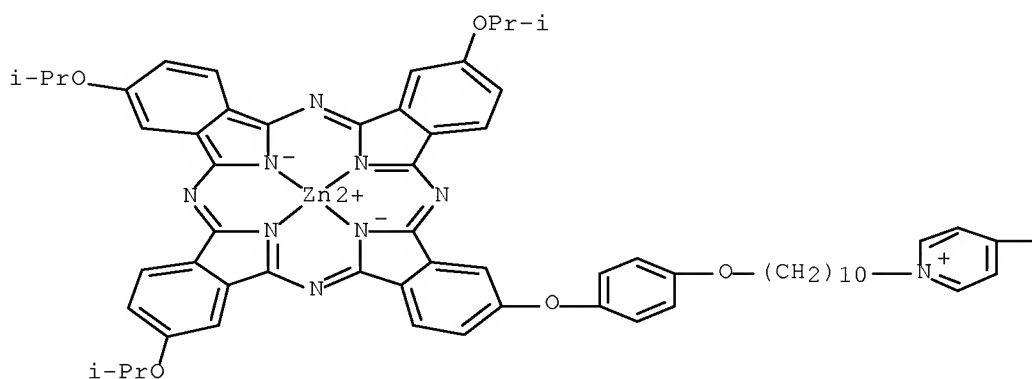


PAGE 1-B

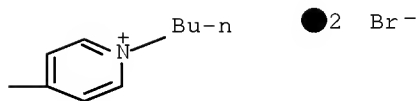


RN 168103-13-7 HCAPLUS  
 CN Zinc(2+), [1-butyl-1'-[10-[4-[[9,16,23-tris(1-methylethoxy)-29H,31H-phthalocyanin-2-yl-κN29,κN30,κN31,κN32]oxy]phenoxy]decyl]-4,4'-bipyridiniumato(2-)]-, dibromide, (SP-4-2)- (9CI)  
 (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 29, 78

IT Energy level excitation

Fluorescence

Photolysis

Ultraviolet and visible spectra

(photoinduced intramol. electron transfer and charge separation in zinc phthalocyanine-viologen linked system)

IT 168103-10-4 168103-11-5 168103-12-6  
168103-13-7

(photoinduced intramol. electron transfer and charge separation in zinc phthalocyanine-viologen linked system)

L47 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:469195 HCAPLUS Full-text

DOCUMENT NUMBER: 121:69195

ORIGINAL REFERENCE NO.: 121:12241a,12244a

TITLE: Photoinduced intramolecular electron transfer in triad compound zinc phthalocyanine-viologen-ferrocene and its photoelectric effect

AUTHOR(S): Zhou, Qingfu; Liu, Jixiang; Xu, Huijun; Xu, Jinmei; Jia, Jianguang; Xiao, Xurui

CORPORATE SOURCE: Inst. Photogr. Chem., Acad. Sin., Beijing, 100101, Peop. Rep. China

SOURCE: Guangxue Yu Guang Huaxue (1993), 11(4), 349-55

CODEN: GKKHE9; ISSN: 1000-3231

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

ED Entered STN: 06 Aug 1994

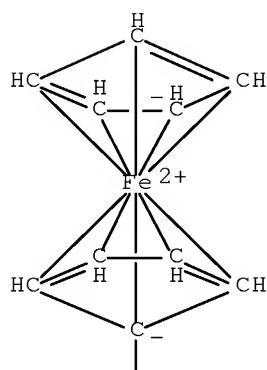
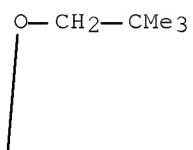
AB A novel amphiphilic triad compound was synthesized by linking viologen with zinc phthalocyanine and ferrocene by flexible chains. Absorption and fluorescence spectra as well as fluorescence lifetime have been determined. Time resolved transient absorption spectrum and time profile measurements show that photoinduced intramol. electron transfer in the triad is more efficient than that in dyad, giving a final long-living charge-separated state with longer lifetime beyond 100  $\mu$ s. A mechanism of two-step charge separation process was suggested. The thin films of the triad compound mols. in monolayer and multilayers were successfully deposited on SnO<sub>2</sub> substrate and photoelec. effect of the Langmuir-Blodgett films were observed

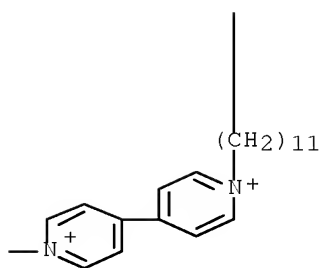
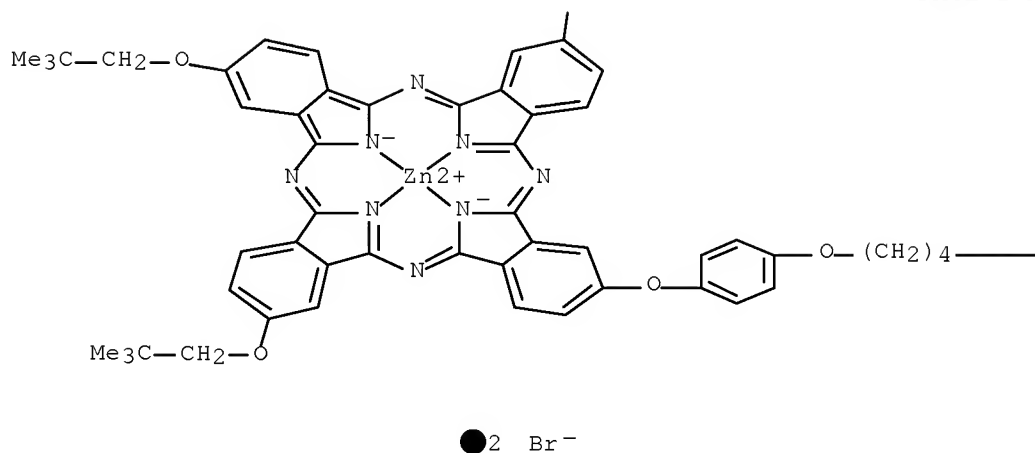
IT 151566-75-5

(photoinduced intramol. electron transfer in, photoelec. effect in monolayer and multilayers of)

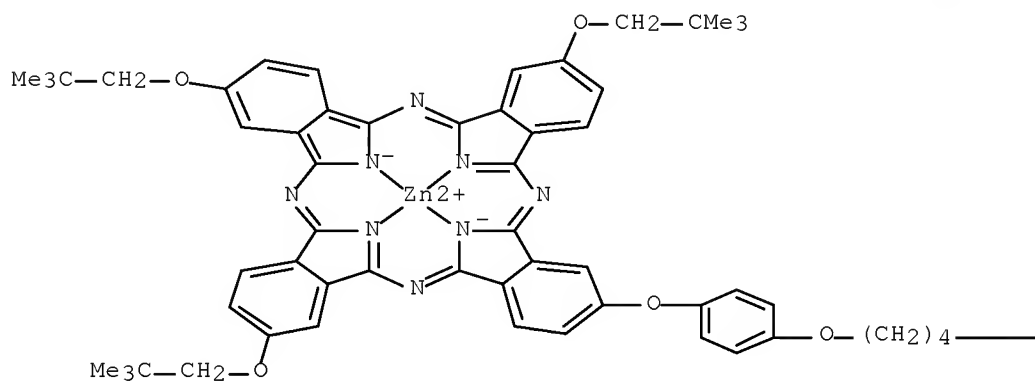
RN 151566-75-5 HCAPLUS

CN Zinc(2+), [1-(11-ferrocenylundecyl)-1'-[4-[4-[[9,16,23-tris(2,2-dimethylpropoxy)-29H,31H-phthalocyanin-2-yl]oxy]phenoxy]butyl]-4,4'-bipyridiniumato(2-)-N29,N30,N31,N32]-, dibromide, (SP-4-2)- (9CI) (CA INDEX NAME)

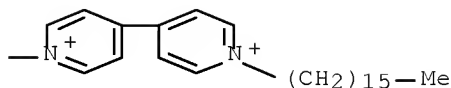




IT 151422-71-8  
 (photophys. properties of, intramol. electron transfer in)  
 RN 151422-71-8 HCAPLUS  
 CN Zinc(2+), [1-hexadecyl-1'-[4-[4-[9,16,23-tris(2,2-dimethylpropoxy)-29H,31H-phthalocyanin-2-yl]oxy]phenoxy]butyl]-4,4'-bipyridiniumato(2-)-N29,N30,N31,N32]-, dibromide, (SP-4-2)- (9CI) (CA INDEX NAME)







CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT 151566-75-5

(photoinduced intramol. electron transfer in, photoelec. effect in monolayer and multilayers of)

IT 151422-71-8

(photophys. properties of, intramol. electron transfer in)

L47 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1994:41772 HCAPLUS Full-text

DOCUMENT NUMBER: 120:41772

ORIGINAL REFERENCE NO.: 120:7513a,7516a

TITLE: Influence of halogenation and aggregation on photosensitizing properties of zinc phthalocyanine.

AUTHOR(S): Zhang, Xianfu; Xu, Huijun

CORPORATE SOURCE: Inst. Photogr. Chem., Acad. Sin., Beijing, 100101, Peop. Rep. China

SOURCE: Journal of the Chemical Society, Faraday Transactions (1993), 89(18), 3347-51  
CODEN: JCFTEV; ISSN: 0956-5000

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 22 Jan 1994

AB The effects of halogenation and aggregation on photosensitizing properties of zinc phthalocyanine (ZnPC) were examined by photophys. methods. Halogenation decreases the fluorescence yield and lifetime, increases triple formation and shortens the triplet lifetime. These effects, which increase in the order Cl < Br < I, can be explained in terms of spin-orbit coupling theory. The aggregation behavior for halogenated ZnPC in DMSO was observed by absorption spectroscopy. Assuming that no higher aggregates than dimers are formed, dimerization equilibrium consts. were calculated using a modified non-linear least-squares fitting method. Quant. anal. for the influence of dimerization on apparent molar absorption coefficient, fluorescence quantum yield, and the quantum yield of singlet oxygen generation was given. Factors that govern the photosensitized production of singlet oxygen were also discussed quant. in

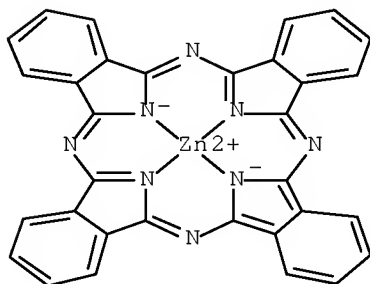
order to explain the ability of singlet oxygen production by halogenated ZnPC. The enhanced intersystem crossing process between the triplet state of sensitizer and oxygen was not affected by the nature of the halogen atom.

IT 152130-27-3

(photosensitizing properties of, effect of halogenation and aggregation on)

RN 152130-27-3 HCAPLUS

CN Zinc, [C,C,C,C-tetrabromo-29H,31H-phthalocyaninato(2-)-N29,N30,N31,N32]- (9CI) (CA INDEX NAME)



4 ( D1-Br )

CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

IT Fluorescence

(of zinc phthalocyanine, effect of halogenation and aggregation on lifetime of)

IT 27614-79-5 152130-27-3 152130-28-4

(photosensitizing properties of, effect of halogenation and aggregation on)

L47 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1993:685025 HCAPLUS Full-text

DOCUMENT NUMBER: 119:285025

ORIGINAL REFERENCE NO.: 119:50739a,50742a

TITLE: Photoinduced intramolecular electron transfer in a novel zinc phthalocyanine-viologen-ferrocene triad system

AUTHOR(S): Liu, Jixiang; Zhou, Qingfu; Xu, Huijun

CORPORATE SOURCE: Inst. Photogr. Chem., Acad. Sin., Beijing, 100101, Peop. Rep. China

SOURCE: Chinese Chemical Letters (1993), 4(4), 339-42

CODEN: CCLEE7; ISSN: 1001-8417

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 25 Dec 1993

AB A novel triad system zinc phthalocyanine-viologen-ferrocene was prepared. Photoinduced intramol. electron transfer in the new triad system was investigated by fluorescence quenching experiment and nanosecond flash photolysis technique, giving a final long-living charge-separated state. A mechanism of two-step charge separation was suggested.

IT 151422-71-8P 151566-75-5P

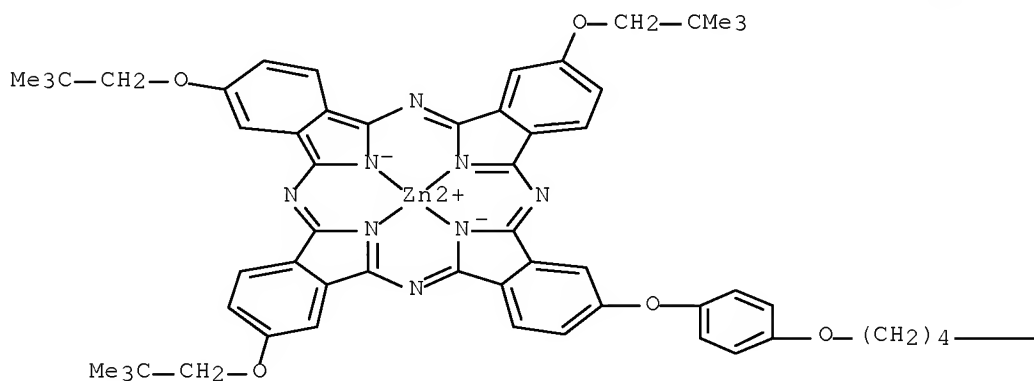
10/520,321

(preparation and fluorescence quantum yield and lifetime of)

RN 151422-71-8 HCAPLUS

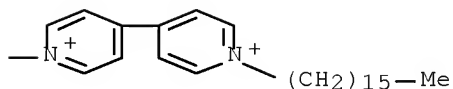
CN Zinc(2+), [1-hexadecyl-1'-[4-[4-[9,16,23-tris(2,2-dimethylpropoxy)-29H,31H-phthalocyanin-2-yl]oxy]phenoxy]butyl]-4,4'-bipyridiniumato(2-)-N29,N30,N31,N32]-, dibromide, (SP-4-2)- (9CI) (CA INDEX NAME)

PAGE 1-A



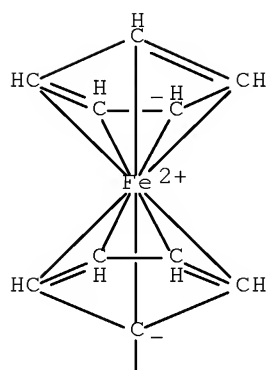
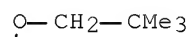
PAGE 1-B

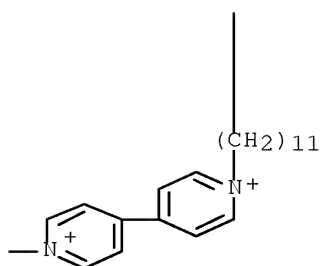
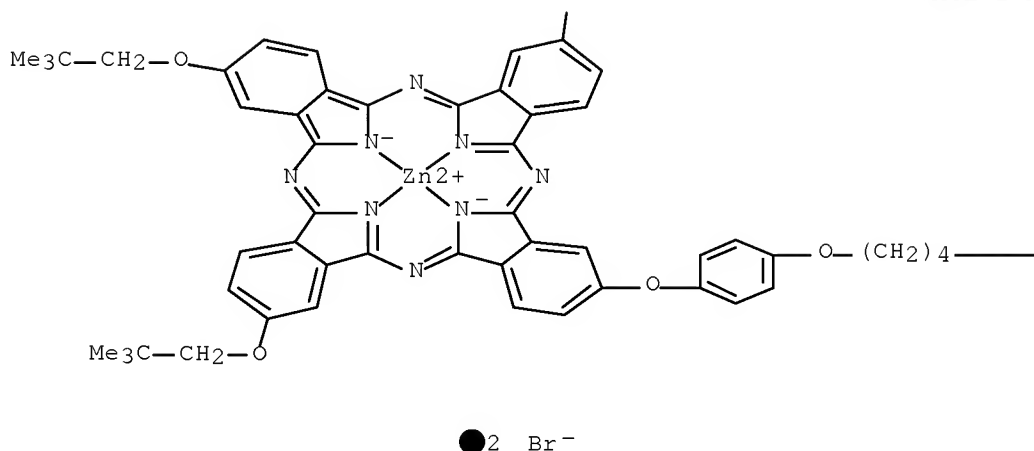
●2 Br<sup>-</sup>



RN 151566-75-5 HCAPLUS

CN Zinc(2+), [1-(11-ferrocenylundecyl)-1'-[4-[4-[9,16,23-tris(2,2-dimethylpropoxy)-29H,31H-phthalocyanin-2-yl]oxy]phenoxy]butyl]-4,4'-bipyridiniumato(2-)-N29,N30,N31,N32]-, dibromide, (SP-4-2)- (9CI) (CA INDEX NAME)





- CC 78-7 (Inorganic Chemicals and Reactions)  
Section cross-reference(s): 73, 74
- ST electron transfer zinc phthalocyanine viologen ferrocene; zinc phthalocyanine ferrocenylviologen deriv; viologen ferrocenyl deriv phthalocyanine zinc; fluorescence zinc phthalocyanine ferrocenylviologen deriv
- IT Fluorescence quenching  
(of zinc phthalocyanine ferrocenylviologen derivative complex)
- IT Fluorescence  
(of zinc phthalocyanine ferrocenylviologen derivative complex, quantum yields of)
- IT 93581-78-3P 151422-71-8P 151566-75-5P  
(preparation and fluorescence quantum yield and lifetime of)

L47 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN  
ACCESSION NUMBER: 1992:601592 HCAPLUS Full-text  
DOCUMENT NUMBER: 117:201592  
ORIGINAL REFERENCE NO.: 117:34629a,34632a  
TITLE: Aspects of metal phthalocyanine photosensitization systems for light energy conversion  
AUTHOR(S): Xu, Huijun; Shen, Tao; Zhou, Qingfu; Shen, Shuyin; Liu, Jixiang; Li, Li; Zhou, Shengze; Zhang, Xianfu; Yu, Qun; et al.

CORPORATE SOURCE: Inst. Photogr. Chem., Acad. Sin., Beijing, 100101,  
Peop. Rep. China

SOURCE: Journal of Photochemistry and Photobiology, A:  
Chemistry (1992), 65(1-2), 267-76  
CODEN: JPPCEJ; ISSN: 1010-6030

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 15 Nov 1992

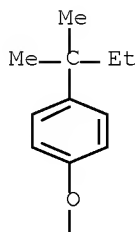
AB Metal phthalocyanine photosensitized donor-acceptor systems for light energy conversion and for the design of photoelectrochem. mol. devices are presented. Fluorescence studies show that the fluorescence and lifetime of the phthalocyanine moiety are appreciably diminished by attached viologen, quinones and porphyrin. The quenching of the fluorescence of Zn phthalocyanine by linked viologen, giving rise to a long-lived charge separated state, was observed by nanosecond laser photolysis. The decrease in the fluorescence and lifetime induced by quinones was examined and the apparent electron transfer rate consts. were calculated depending on the chain length and solvent polarity. When these linked compds. were incorporated into a lipid bilayer membrane (LBM) and/or coated on a transparent tin oxide electrode, an enhancement of the photoeffects was observed compared with nonlinked compds. and can be explained in terms of intramol. charge transfer processes.

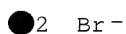
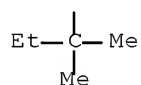
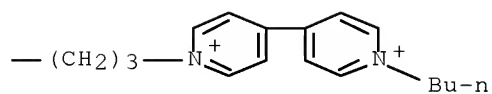
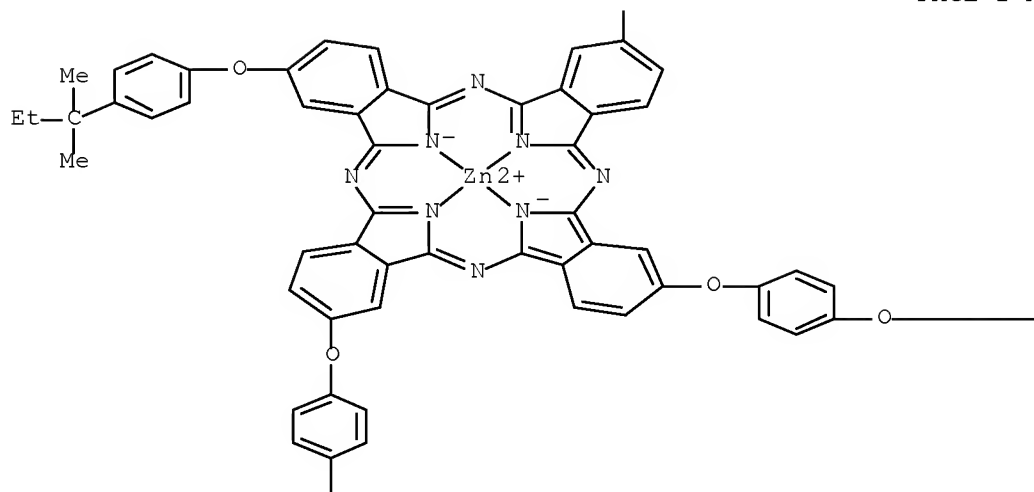
IT 128313-30-4 143714-19-6 143714-20-9  
(photophys. of, light energy conversion and design of photoelectrochem. mol. devices using)

RN 128313-30-4 HCAPLUS

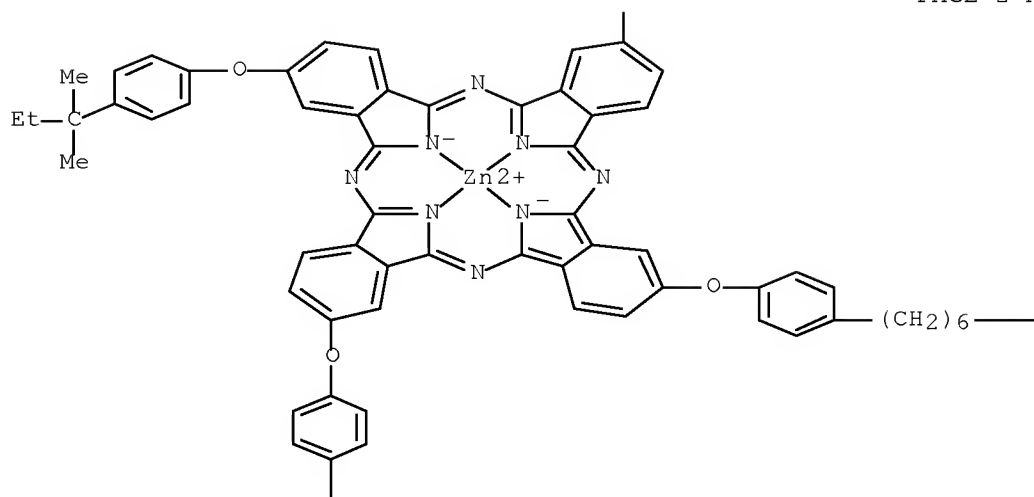
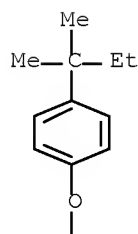
CN Zinc(2+), [1-butyl-1'-[3-[4-[[9,16,23-tris[4-(1,1-dimethylpropyl)phenoxy]-29H,31H-phthalocyanin-2-yl]oxy]phenoxy]propyl]-4,4'-bipyridiniumato(2-)-N29,N30,N31,N32]-, dibromide, (SP-4-2)- (9CI)  
(CA INDEX NAME)

PAGE 1-A

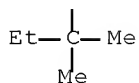
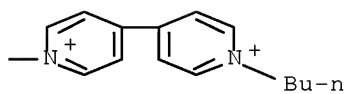




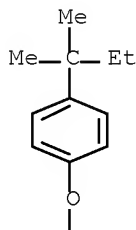
RN 143714-19-6 HCAPLUS  
 CN Zinc(2+), [1-butyl-1'-[6-[4-[[9,16,23-tris[4-(1,1-dimethylpropyl)phenoxy]-29H,31H-phthalocyanin-2-yl]oxy]phenyl]hexyl]-4,4'-bipyridiniumato(2-)-N29,N30,N31,N32]-, dibromide, (SP-4-2)- (9CI)  
 (CA INDEX NAME)



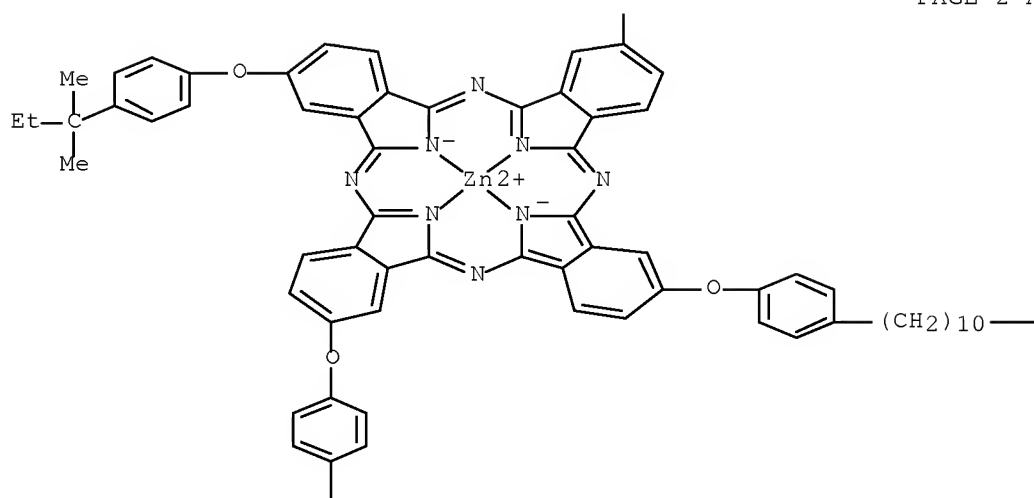




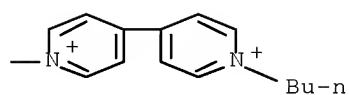
RN 143714-20-9 HCAPLUS  
 CN Zinc(2+), [1-butyl-1'-[10-[4-[9,16,23-tris[4-(1,1-dimethylpropyl)phenoxy]-29H,31H-phthalocyanin-2-yl]oxy]phenyl]decyl]-4,4'-bipyridiniumato(2-)-N29,N30,N31,N32]-, dibromide, (SP-4-2)- (9CI)  
 (CA INDEX NAME)



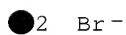
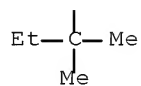
PAGE 2-A



PAGE 2-B



PAGE 3-A



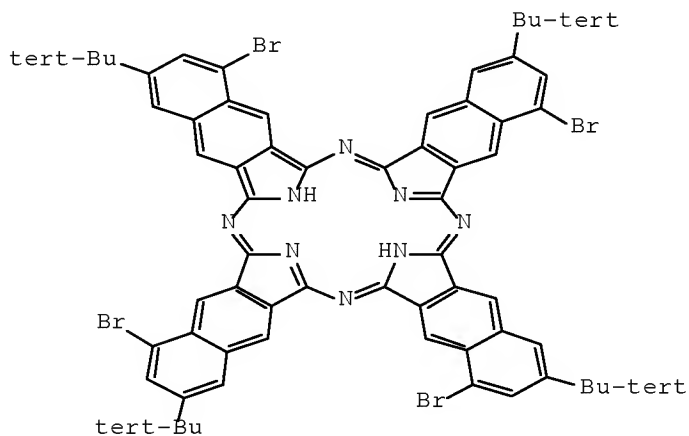
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic  
and Other Reprographic Processes)  
Section cross-reference(s): 29, 52  
IT Fluorescence  
Photolysis

(of zinc phthalocyanine-viologen donor-acceptor compds., for light energy conversion)

IT 135126-25-9 135126-26-0 143714-23-2  
 (photochem. electron transfer fluorescence quenching in,  
 design of photoelectrochem. mol. devices in relation to)  
 IT 128313-30-4 128484-77-5 128545-55-1 143714-19-6  
 143714-20-9  
 (photophys. of, light energy conversion and design of  
 photoelectrochem. mol. devices using)

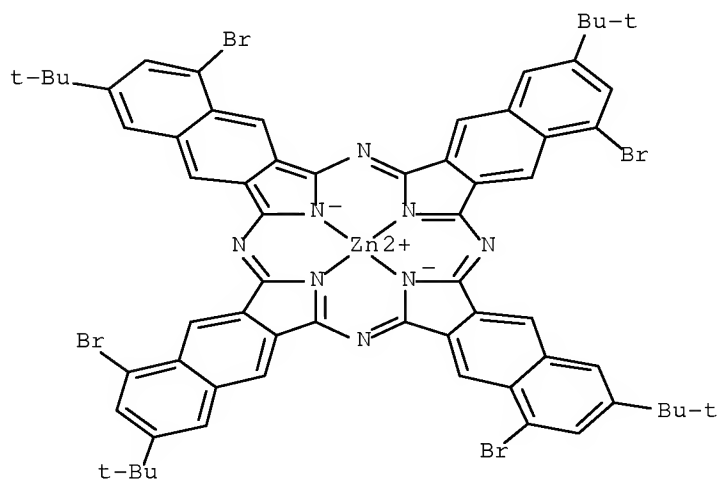
L47 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2009 ACS on STN

ACCESSION NUMBER: 1986:7202 HCAPLUS Full-text  
 DOCUMENT NUMBER: 104:7202  
 ORIGINAL REFERENCE NO.: 104:1295a,1298a  
 TITLE: Phthalocyanines and related compounds. XXV.  
 5,5',5'',5'''-Tetrabromo-7,7',7'',7'''-tetra-tert-butyl-2,3-naphthalocyanines  
 AUTHOR(S): Gal'pern, M. G.; Talismanova, T. D.; Tomilova, L.  
 G.; Luk'yanets, E. A.  
 CORPORATE SOURCE: Nauchno-Issled. Inst. Org. Poluprod. Krasitelei,  
 Moscow, USSR  
 SOURCE: Zhurnal Obshchei Khimii (1985), 55(5),  
 1099-106  
 CODEN: ZOKHA4; ISSN: 0044-460X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian  
 ED Entered STN: 11 Jan 1986  
 GI



AB 5,5',5'',5'''-Tetrabromo-7,7',7'',7'''-tetra-tert-butyl-2,3-naphthalocyanine (I) [99520-49-7] and its Cu, Zn, Al, V, and Lu complexes were prepared and their spectral and oxidation properties were determined. The electrochem. oxidation potentials of I complexes indicated that the presence of Br groups led to increased oxidation stability, compared with nonbrominated analogs. The Br atoms also led to decreased solubility of I in organic solvents and to a broadening and hypsochromic shift of the main absorption bands. The Lu complex was a sandwich compound.

IT 99537-08-3  
 (electron spectra and oxidation of, bromine substituent  
 effect on)  
 RN 99537-08-3 HCAPLUS  
 CN Zinc, [1,10,19,28-tetrabromo-3,12,21,30-tetrakis(1,1-dimethylethyl)-  
 37H,39H-tetranaphtho[2,3-b:2',3'-g:2'',3''-l:2''',3'''-  
 q]porphyrazinato(2-)-N37,N38,N39,N40]-, (SP-4-1)- (9CI) (CA INDEX  
 NAME)



CC 41-7 (Dyes, Organic Pigments, Fluorescent Brighteners, and  
 Photographic Sensitizers)  
 IT Oxidation  
 (of tetrabromotetra-tert-butyl naphthalocyanine and its complexes,  
 bromine substituent effect on)  
 IT 61024-97-3  
 (bromination of)  
 IT 99520-49-7 99537-07-2 99537-08-3 99537-09-4 99537-10-7  
 99552-05-3 99562-03-5  
 (electron spectra and oxidation of, bromine substituent  
 effect on)

=> d his nofile

(FILE 'HOME' ENTERED AT 09:11:55 ON 28 APR 2009)

FILE 'HCAPLUS' ENTERED AT 09:12:06 ON 28 APR 2009

L1 1 SEA SPE=ON ABB=ON PLU=ON US20060098316/PN  
SEL RN

FILE 'REGISTRY' ENTERED AT 09:12:22 ON 28 APR 2009

L2 3 SEA SPE=ON ABB=ON PLU=ON (14320-04-8/BI OR 7726-95-6/BI  
OR 97626-82-9/BI)  
L3 28 SEA SPE=ON ABB=ON PLU=ON 14320-04-8/CRN  
L4 1 SEA SPE=ON ABB=ON PLU=ON 97626-82-9/RN  
L5 1 SEA SPE=ON ABB=ON PLU=ON 7726-95-6/RN  
L6 1002 SEA SPE=ON ABB=ON PLU=ON 7726-95-6/CRN  
L7 1 SEA SPE=ON ABB=ON PLU=ON L2 AND C32 H16 BR N8 ZN/MF

FILE 'HCAPLUS' ENTERED AT 09:14:27 ON 28 APR 2009

L8 2 SEA SPE=ON ABB=ON PLU=ON L7  
L9 27 SEA SPE=ON ABB=ON PLU=ON L3  
L10 2 SEA SPE=ON ABB=ON PLU=ON L4  
L11 1251 SEA SPE=ON ABB=ON PLU=ON L6  
L12 0 SEA SPE=ON ABB=ON PLU=ON L9 AND L11  
L13 29 SEA SPE=ON ABB=ON PLU=ON (L8 OR L9 OR L10)  
L14 1 SEA SPE=ON ABB=ON PLU=ON L13 AND L1

FILE 'REGISTRY' ENTERED AT 09:15:49 ON 28 APR 2009

L15 1 SEA SPE=ON ABB=ON PLU=ON 14320-04-8/RN

FILE 'HCAPLUS' ENTERED AT 09:16:15 ON 28 APR 2009

L16 1666 SEA SPE=ON ABB=ON PLU=ON L15  
L17 0 SEA SPE=ON ABB=ON PLU=ON L16 AND L6  
L18 6 SEA SPE=ON ABB=ON PLU=ON L16(L)GREEN PIGMENT?  
L19 13 SEA SPE=ON ABB=ON PLU=ON L16 AND GREEN PIGMENT?

FILE 'REGISTRY' ENTERED AT 09:18:27 ON 28 APR 2009

L20 STR 97626-82-9  
L21 0 SEA SSS SAM L20  
L22 STR L20  
L23 0 SEA SSS SAM L22  
E ZINC PHTHALOCYANINE/CN  
L24 1 SEA SPE=ON ABB=ON PLU=ON "ZINC PHTHALOCYANINE"/CN  
L25 STR L20  
L26 50 SEA SSS SAM L25  
L27 3989 SEA SSS FUL L25  
L28 2 SEA SPE=ON ABB=ON PLU=ON L27 AND L2  
SAV L27 MCP321/A  
L29 71 SEA SPE=ON ABB=ON PLU=ON L27 AND BR/ELS  
L30 0 SEA SUB=L27 SSS SAM L20  
L31 6 SEA SUB=L27 SSS FUL L20

FILE 'HCAPLUS' ENTERED AT 09:25:35 ON 28 APR 2009

L32 3 SEA SPE=ON ABB=ON PLU=ON L31  
L33 46 SEA SPE=ON ABB=ON PLU=ON L29  
L34 3553 SEA SPE=ON ABB=ON PLU=ON L27  
L35 0 SEA SPE=ON ABB=ON PLU=ON L34 AND L11

10/520,321

L36	9	SEA	SPE=ON	ABB=ON	PLU=ON	L34(L)GREEN PIGMENT?
L37	17	SEA	SPE=ON	ABB=ON	PLU=ON	L34 AND GREEN PIGMENT?
L38	7	SEA	SPE=ON	ABB=ON	PLU=ON	L37 AND BROMIN?
L39	3	SEA	SPE=ON	ABB=ON	PLU=ON	L33 AND GREEN PIGMENT?
L40	8	SEA	SPE=ON	ABB=ON	PLU=ON	L33 AND PIGMENT?
L41	29	SEA	SPE=ON	ABB=ON	PLU=ON	L33 AND PHOTOG?/SC, SX
L42	3	SEA	SPE=ON	ABB=ON	PLU=ON	L32 OR L10 OR L14
L43	17	SEA	SPE=ON	ABB=ON	PLU=ON	L35 OR L36 OR (L38 OR L39 OR L40)
L44	15	SEA	SPE=ON	ABB=ON	PLU=ON	L43 NOT L42
L45	15	SEA	SPE=ON	ABB=ON	PLU=ON	L41 AND (CHLORIN? OR BROMIN? OR IOD? OR FLUOR?)
L46	29	SEA	SPE=ON	ABB=ON	PLU=ON	L44 OR L45
L47	19	SEA	SPE=ON	ABB=ON	PLU=ON	L46 AND (1840-2003)/PRY, AY, PY